

Skagit Valley College Childcare Center



Feasibility Study
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1.0 Project Introduction

1.1. Background

Childcare facilities are increasingly becoming a necessary student amenity for college campuses. These facilities allow for greater student flexibility in personal scheduling and attending classes and allow colleges to accommodate a wider range of potential students by welcoming students with families. A functional and attractive childcare center can foster a stronger sense of community, and Early Childhood Education (ECE) programs can take advantage of expanded hands-on educational opportunities provided by the facility.

Skagit Valley College intends to develop a childcare center on the Mount Vernon campus. In addition to providing programmatic benefits, the proposed childcare center will also be the first component of a “community/recreation quad” envisioned in the Skagit Valley College Master Plan. This quad, which is planned for an area in the northeast sector of campus, will ultimately become a hub for college and community activity.

This project is slated to be funded with local funds and the College has identified a project budget of \$2 million.

1.2. Purpose of Feasibility Study

The purpose of this Feasibility Study is to confirm the program requirements for the proposed childcare center, test the capacity of the selected site and existing utility infrastructure to accommodate the stated program, and establish the estimated construction cost in order to verify the project budget. The size of the childcare center and program will be adjusted to meet the stated project budget within the functional constraints. The childcare center must meet both Department of Early Learning (DEL) and National Association for the Education of Young Children (NAEYC) licensing and accreditation requirements.

1.3. Methodology

Schacht Aslani Architects conducted a series of workshops with the SVC Task Force assigned to the project in order to develop the program and user criteria for the proposed building. Consultants from Hargis Engineers, Coughlin Porter Lundeen, Lund Opsahl, Cascade Design Collaborative, and Talasaea evaluated the existing site conditions, existing utilities and required building systems. Staff from Schacht Aslani Architects also visited similar childcare centers with members of the Task Force to gather comparison data.

After conducting the programming sessions, evaluating the existing site and required infrastructure, and studying relevant examples, several test-to-fit planning schemes were developed and reviewed with the project stakeholders. A preferred scheme was identified and a corresponding set of test-to-fit concept plans was prepared to establish a precise estimated construction cost. Product Delivery Analysts was engaged to develop this cost estimate. The program and building size were then adjusted in collaboration with the college to align the construction cost with the anticipated project budget. The resulting project scope is described in detail on the following pages.

1.4. Findings

Development of a childcare center is feasible within the budgetary limitations and program requirements defined by the College. The following pages describe the program, building, site development, and cost components of the potential project in detail.

2.0 Regulatory Requirements

2.1. International Building Code

The building must comply with the 2012 edition of the International Building Code (IBC) with Washington State Amendments.

The assigned building occupancy is designated as an “E - Educational”, assuming that the childcare classrooms are located on the ground level and assuming that each includes a direct exit to the building exterior. The building construction type is VB, the least restrictive in terms of available materials and assemblies. No rated partitions, assemblies, or structural elements are required. The building must have an automatic sprinkler system and a fire alarm system. The maximum building height allowed by the building code is 60 feet, maximum stories is two, and maximum floor area is 38,000 GSF. A detailed code analysis is included in the Appendix.

2.2. City of Mount Vernon Municipal Code

The building and site development must comply with the requirements of the Mount Vernon Municipal Code (MVMC) with regard to setbacks, parking requirements, fire access and zoning.

The entire Skagit Valley College campus is designated a “P-Public District” zone. This zone is intended to provide areas within the community that are available for public use, and the childcare center is permitted outright in this zone as an activity customarily associated with and necessary to the operation of the permitted use (MVMC 17.30.030). No rear or side setbacks from parcel lines are required. A front setback is only applicable along a public street. No maximum lot coverage is assigned. The maximum building height is 50 feet and four stories.

Landscaping

A minimum of 15% of the non-parking site area and 10% of the parking lot site area must be dedicated to landscaping. Landscape islands within the parking lot must be 10 feet in width. All landscaping must meet the requirements of MVMC section 17.93. Trees must be provided for every 150 square feet of required landscaping.

Parking

The number of parking stalls required for the childcare center use is one parking stall per each employee plus loading and unloading areas. All parking must meet the requirements of MVMC section 17.84. One handicapped stall is required and it must be van accessible. Based upon the staff-to-student ratios and the classroom sizes anticipated, this facility will require nine dedicated staff parking spaces. Any existing college parking that is displaced by the site development must also be replaced. Five dedicated pickup and drop-off spaces have been included in the test-to-fit site development plan based on facilities of a similar size.

Fire Code

The building must meet the requirements of the International Fire Code (IFC) 2009 edition and will undergo a site planning review by the Mount Vernon Fire Marshal. A fire apparatus access road complying with the fire code requirements must extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building, as measured by an approved route around the exterior of the building. A fire sprinkler room with direct exterior access is required. A fire hydrant must be provided within 450' of the building.

Wetland Classification, setbacks and Requirements

The wetland observed adjacent to the site is a Category IV wetland, based on the Washington State Wetland Rating System for Western Washington (Hruby 2006). Based on MVMC section 15.40.090, this wetland requires a 50-foot buffer measured from the delineated wetland edge. Development within this category IV wetland or buffer is possible, with appropriate wetland mitigation and functional replacement. Work within the wetland or buffer should be avoided if at all possible.

To support the childcare project, the college will be required to conduct a study to determine the classification of the wetland “if the subject property or project area is within 150 feet of a wetland even if the wetland is not located on the subject property, but it is determined that alterations of the subject property are likely to impact the wetland in question or its buffer”. The observed wetland adjacent to the childcare site immediately to the east will meet this threshold. An initial wetland reconnaissance has been performed to establish the location of the wetland and required setback. During the design phase, a wetland classification report must be generated that includes a completed wetland rating form and the surveyed location of the wetland boundary as part of the permit review process. These requirements will be established at the pre-application meeting held with city administrators.



2.3. Washington Administrative Code

The Washington Administrative Code (WAC) includes a series of administrative and operational requirements for childcare centers across the state. These requirements are administered through the Department of Early Learning (DEL) and a licensor from the DEL will be assigned to review this project during design and during construction prior to occupancy. The licensor will grant the facility an operational license. The following WAC requirements are most applicable to the building configuration. A detailed list of requirements is included in the Appendix.

Licensed Capacity (WAC 170-295-0080)

The licensed capacity of the childcare center is based upon the licensor’s evaluation of the program, the ages and characteristics of the children, the experience of the staff, and the usable floor space and plumbing fixture counts. The minimum usable floor space is defined by age group as follows:

- 50 square feet for each infant, including crib footprint
- 50 square feet for each toddler still using a crib during napping hours
- 35 square feet for each toddler or older child

The usable floor area cannot include support or prep spaces, and the licensor has the right to issue a license for fewer children than that determined solely through the minimum square footage.

Staff to Child Ratios and group sizes (WAC 170-295-2090)

Staff to child ratios and maximum group sizes are established in the WAC as follows by age range. The center must adhere to these sizes and ratio at all times, and they often become the basis for establishing room and activity area sizes.

1 Month to 11 Months old (Infant)

- Child to Staff Ratio: 1:4
- Maximum Group Size: 8

12 Months to 29 Months Old (Toddler)

- Child to Staff Ratio: 1:7
- Maximum Group Size: 14

30 Months to 5 Years old (Preschool)

- Child to Staff Ratio: 1:10
- Maximum Group Size: 20

Outdoor play Area (WAC 170-295-2130)

An outdoor program must be provided that promotes children’s coordination, active play, and physical, mental, emotional, and social development. This play area must have a minimum size of seventy-five square feet per child, and children must have scheduled time both in the morning and afternoon for outdoor play. This area must be fenced and secure (WAC 170-295-5090).

Toilet and Handwashing facilities

One flush-type toilet and one adjacent sink is required for every fifteen children. These fixtures must be size-appropriate to the various age ranges that are intended to use them. These fixtures must be within auditory range of the child care classrooms. Toileting privacy is required for children of opposite genders for children 6 years of age or older or when a child demonstrates a need for privacy.

A detailed summary of the other applicable WAC requirements can be found in the Appendix.

2.4. National Association for the Education of Young Children



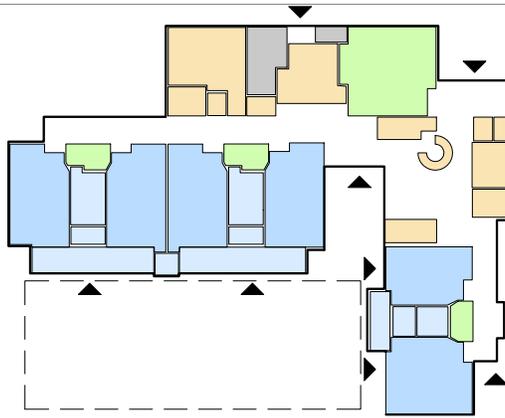
The college intends to pursue accreditation of the childcare center through the National Association for the Education of Young Children (NAEYC). This optional industry-standard accreditation program includes requirements for facility operation, curriculum, staff training, assessment and the physical environment. For the purposes of the childcare center feasibility study, emphasis was placed on adhering to the items pertaining to the physical environment. NAEYC accreditation will occur after the facility is occupied and will not be part of the permitting or licensing process.

NAEYC Standard 9 - Physical Environment

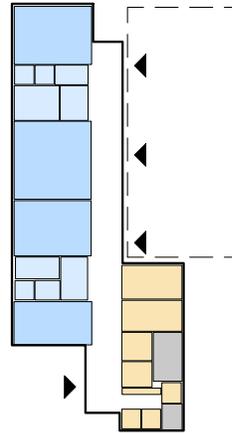
The following requirements are found in NAEYC Standard 9 - Physical Environment. The test-to-fit plan conforms to these requirements. Additional items can be found in the Appendix.

- 9.A.01.A Equip. and furnishings for diaper and clothing changing away from food preparation areas
- 9.A.01.B Hand-washing sinks within arm's length of diaper changing tables
- 9.A.02.A Individual space is provided for each child's belongings
- 9.A.05.A Staff can supervise children by sight and sound at all times without artificial monitoring devices
- 9.A.05.B In semiprivate areas, it is possible for children and adults to be observed from outside the area
- 9.A.09.A Defined places where families can gather info regarding daily schedules and upcoming events
- 9.A.09.B Defined places where families sign in, sign out, and gather information about their child's day
- 9.A.09.C Places for displaying children's work
- 9.A.09.D Features that moderate visual and auditory stimulation
- 9.A.10.A Washable, soft elements for groups to sit in close proximity for conversations or comforting
- 9.A.12.A Accommodate children individually, in small groups and in a large group
- 9.A.12.B Divide space into areas supplied with materials to support children's play and learning
- 9.A.12.C Provide semiprivate areas where children can play or work alone or with a friend

TACOMA COMMUNITY COLLEGE
13,680 GSF



GRAYS HARBOR COLLEGE
5,960 GSF



SKAGIT VALLEY COLLEGE (Proposed)
4,408 GSF

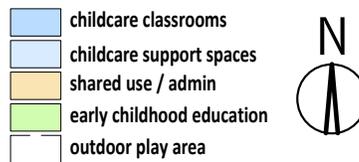
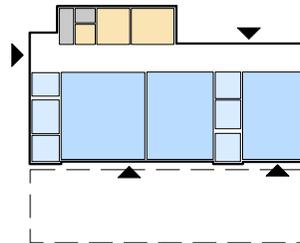


Figure 1. Program/Plan Comparison of Similar Childcare Centers

3.0 Functional Program

3.1. Program Development

The building program was developed in collaboration with the SVC Task Force and partially based upon a comparative analysis of several similar childcare centers within the State system. The program comparison diagram (see figure 1) compares the proposed SVC childcare footprint with those of the two facilities deemed to be the most similar in operation and configuration, Tacoma Community College and Grays Harbor College.

3.2. Summary of Functional Spaces

The following functional spaces make up the proposed childcare center program.

Director's Office

The Director's Office provides a dedicated administrative space for the childcare center director and serves as the primary check-in point for parents and visitors. The Director's Office contains a single workstation, secure file storage and furniture needed to accommodate occasional private parent conferences with either administrative or outside agency staff.

Main Entrance

The Main Entrance serves as the only public entry into the childcare facility. Card-key access or a buzz-in system is required. Sight lines from the entry to the parking and drop-off areas must be maintained through this zone so that building occupants can see approaching individuals. A vestibule should be included to limit energy loss, and the entry doors must be ADA accessible with an automatic door operator. The entry doors must also be easily securable in case of a lock-down or other emergency.

Entry Porch

A covered outdoor space located at the building entry provides weather protection. This space should be large enough to accommodate stroller parking and waiting space.

Kitchen/Break Room

The Kitchen/Break room is used primarily for meal preparation to support the preschool classrooms. This room includes work counters, upper and lower cabinets, refrigerator, dishwasher, sink, a microwave and a range. The casework and equipment within must meet all requirements of the WAC with regard to childcare meal preparation. This room also includes a storage pantry for food storage. This space also includes appropriate furniture for staff use during work breaks.

The Kitchen/Break Room requires direct exterior access to storage for trash, recycling and compost. This door also provides delivery access separate from the childcare areas.

Mechanical Rooms

A Mechanical Room is provided to accommodate required equipment, including the water heater and a sprinkler valve. This room is not publicly accessible and requires direct Fire Department access from the exterior. A test-to-fit layout of this room with the required equipment was used to verify size requirements.

Electrical Room

A dedicated Electrical Room is provided to accommodate the required electrical, telecom and IT equipment. This room includes electrical panels, data rack and backboard, along with the required clearances. This room is not publicly accessible and may be accessed either from the exterior or through an intervening space. A test-to-fit layout of this room with the required equipment was used to verify size requirements.

Infant/Toddler Childcare Classroom

The Infant/Toddler Classroom is the primary activity space for both the infant and toddler age groups. Separate group space must be provided for each age and toddler and infant care zones are separated by a moveable partition system. The room is further divided into activity areas within these zones by moveable furniture that is activity appropriate.

The infant zone includes a napping space with cribs and a protected play area. The toddler activity zone includes separate activity areas dedicated to sensory stimulation, toys & games, reading, dramatic play, gross motor skills development and art. Mealtime space is shared with the infant age group.

The children's furniture will be selected during the design phase in consultation with the College and the facility operator. Initial furniture selections that are shown in the test-to-fit plan were developed in consultation with Community Playthings, a children's furniture vendor.

The Infant/Toddler Classroom requires access to natural light, preferably from controlled direct or indirect sources. This classroom also requires access to the children's outdoor play area, and child-accessible storage (cubbies) for personal items. Windows are provided to the corridor to provide ECE student observation and for parent orientation and viewing. Flooring is a mixture of carpeting and resilient sheet materials.

The room is currently sized per WAC 170-295-0080 and based on the code minimum square footage required to accommodate the maximum group sizes of the two age groups (eight infants with two caregivers, and fourteen toddlers with two caregivers). The actual licensed capacity of the facility will be determined by the Department of Licensing based on an evaluation of the program, the ages and characteristics of the children, the experience of the staff and the usable floor space.

Preschool Childcare Classroom

The Preschool Childcare Classroom provides the primary activity space for the preschool age group. The room is divided into activity areas by moveable furniture that is age and activity appropriate. The preschool classroom includes activity areas dedicated to group/block play, science, gross motor skills, sand and water play, art/mealtime, listening, reading and writing. A handwashing sink is provided outside of the boys and girls bathroom areas.

The furniture selection process, room character and materials required for the preschool classroom align with those of the infant/toddler classroom described above.

The room is currently sized per WAC 170-295-0080 and are based on the code minimum square footage required to accommodate the maximum group sizes of the age group (twenty preschoolers with two caregivers). The actual licensed capacity of the facility will be determined by the Department of Licensing based on an evaluation of the program, the ages and characteristics of the children, the experience of the staff and the usable floor space.

Laundry/Storage Rooms

The Laundry/Storage rooms are support spaces that directly serve the childcare rooms. These rooms provide toy and cot storage, countertop workspace with upper and lower storage cabinets, and stacking washer dryer facilities for cleaning of soiled clothing, towels and other items. Water and venting connections are required. This space requires resilient sheet flooring.

Infant/Toddler Preparation

The Infant/Toddler Preparation room is used for bottle and meal preparation to support the infant and toddler care classroom. The Infant/Toddler Preparation room contains upper and lower cabinets with countertop workspace, a refrigerator, sink and open or closed shelving for segregated food storage. This space requires resilient sheet flooring.

The infant/toddler preparation area must have direct visual and physical access to the childcare area so that proper oversight can be maintained. Cabinet locks, finger guards at all operable doorways and other child-safe hardware must be employed.

Infant/Toddler Diapering

The Infant/Toddler Diapering area is used for diaper changing and early learning toileting facilities to support the infant and toddler classroom. It must have direct visual and physical access to the childcare area so that oversight can be maintained. This area also includes a toddler toilet and handwashing facilities for use under direct supervision.

The Infant/Toddler Diapering room includes upper and lower storage cabinets, work surfaces designed to accommodate two changing tables, a handwashing sink for staff use and adequate storage space for sanitizing equipment and procedures required by the requirements of WAC 170-295-5060 & 170-295-4120. This area may also include space for individual child's supply storage depending on the operating policies of the operator. This space requires resilient sheet flooring. This space is primarily for staff use but must be designed to accommodate children's use with adequate safety hardware and door protection.

Preschool Boys/Girls WC & Diapering

The Preschool Boys and Girls restroom areas provide separated and semi-private washroom facilities designed for preschooler use with adult supervision. Balancing oversight and privacy is an important consideration in the operational design of these rooms. These restrooms provide toileting privacy for children or parents who request it per WAC 170-295-5100 requirements. Because most children in this age group are transitioning out of diaper use and into restroom facilities this room also serves as an important training area. The diapering workspace is provided for children who are not yet comfortable using a child's toilet.

The toilets and sinks in this area are sized to meet the preschool age group size requirements stipulated in WAC 170-295-5100. The diapering area includes lower cabinets and a work surface with upper and lower storage cabinets, work surfaces designed to accommodate one changing table, a handwashing sink for staff use and adequate storage space for sanitizing equipment and procedures required by the requirements of WAC 170-295-5060 & 170-295-4120. This space requires resilient sheet flooring.

Adult Restroom

The Adult Restroom is an ADA-accessible, single-user unisex bathroom for staff and parent use. This restroom contains a toilet and sink that are adult-sized, with tile flooring. Tile may also be provided on the wet wall. This room must include a fold-down changing table for parent use.

Outdoor Play Area

The Outdoor Play Area provides outdoor activity space for all age groups at the childcare center, and includes age-appropriate play equipment and activity areas. The proposed play area shall be sized to accommodate up to two groups of any age group. The outdoor play area includes soft and hardscape areas, a sandbox, a play structure, a tricycle track and space for safe infant and toddler exploration.

The Outdoor Play Area is secured by a six-foot-tall fence around the perimeter of the yard. The landscaping allows for supervision of children inside the play area and for security around the perimeter, avoiding areas that would allow hiding spaces that adults cannot supervise. A single gated entry for emergency access and maintenance should be provided for occasional use. Space should be provided for outdoor equipment storage and a covered outdoor space.

3.3. Required Adjacencies

The following adjacencies are required between the program elements.

Infant/Toddler Suite

Direct physical and visual access is required between the infant/toddler classroom and support spaces associated with it, including Diapering, Laundry/Storage and the Infant Preparation area. Because staff using these support spaces will also be charged with visual and physical oversight of the children, these rooms must be contiguous with the primary classroom area and must have good visibility to all classrooms areas. Low walls and doors are a common solution and are assumed in the test-to-fit plan.

Support spaces are sized to serve both the toddler and infant functions located in the shared classroom space. If desired, the infant classroom and toddler classroom could be separated with these support spaces located between the two classroom spaces. This configuration would have the benefit of greater acoustical and activity separation between the age groups, but limits the ability of the center to accommodate larger groups or alternate age ranges if the infant-to-toddler ratios change. Alternate suite configurations can be explored with the facility operator and the regional licenser from the Department of Early Learning to evaluate the preferred operational model and physical arrangement of the suite spaces.

Preschool Suite

Direct physical and visual access is required between the preschool classroom and support spaces associated with it, which include the Laundry/Storage and the Boys and Girls restrooms. Because staff using these support spaces will also be charged with visual and physical oversight of the children, these rooms must be contiguous with the primary classroom area and must have good visibility to all classrooms areas. Low walls and doors are a common solution and area assumed in the test-to-fit plan.

Support spaces are sized to serve the two preschool classrooms, and are placed between the classrooms for direct access. This continuity of the entire suite also provides the staff with greater oversight flexibility, especially during transitional times of the day when the number of children in the classroom may be significantly lower than the overall capacity.

Directors Office/Entrance Relationship

The Director's Office contains the check-in function and must have visual access to the Main Entrance and the building exterior.

Childcare Classrooms/Outdoor Play Area/Cubby Relationship

The Childcare Classrooms require a direct path to the outdoor play areas. During inclement weather, children must be readied or prepared indoors prior to going outside. This can be accomplished one of two ways: 1) Storage cubbies are placed inside the classrooms and the zone in front of the cubbies is used to dress the children and organize the group. 2) An intervening corridor or transition space holds the cubbies outside the classroom. In either case a clear path must be provided between the outdoor space and classrooms as the Outdoor Play Area must be used twice daily. Consideration should also be given to individual child pickup and drop off activities, which also takes place in the intervening zone.

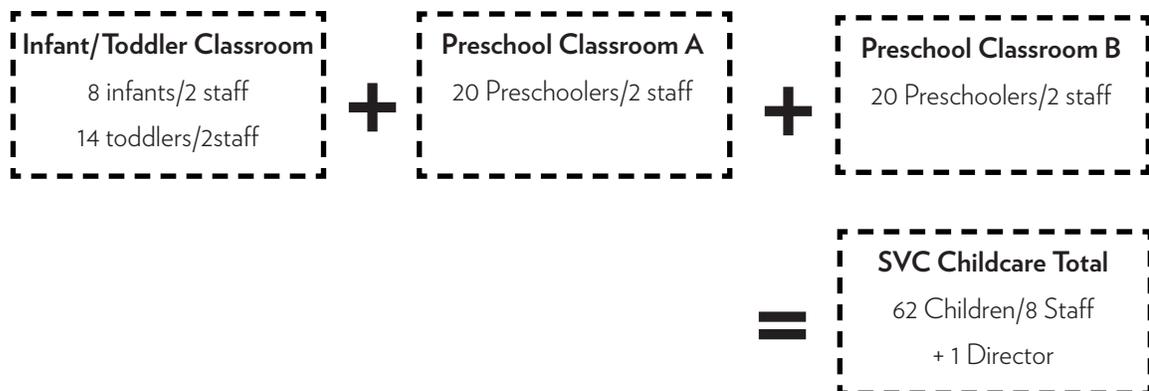
3.4. Space Allocation Table

The Space Allocation Table below is a summary of the building program which corresponds with the test-to-fit plan. The overall building efficiency ratio and cost per square foot are within normal limits for this building type.

				Test-to-Fit Plan		
				Units	ASF/Unit	Subtotal ASF
SVC Childcare Center - Feasibility Phase						3,205
1.0 Childcare						2,830
	Infant/Toddler Shared Classroom (8 infants, 14 Toddlers)	1	890	890		
	Infant /Toddler Storage & Laundry	1	75	75		
	Infant/Toddler Diapering	1	115	115		
	Infant/Toddler Prep	1	90	90		
	Preschool Classroom (20 preschoolers, 2 staff, min 35 sf per preschooler)	2	700	1,400		
	Storage/Laundry	1	80	80		
	Boys Bathroom	1	90	90		
	Girls Bathroom w/Diapering	1	90	90		
2.0 Offices & Shared Spaces						375
	Director's Office	1	140	140		
	Adult Restroom	1	50	50		
	Kitchen	1	135	135		
	Storage Closet	1	25	25		
	Janitors Storage	1	25	25		
Assignable Area (sf)						3,205
Gross Measured Area (sf)						4,410
<i>Efficiency</i>						<i>73%</i>
Estimated Building Cost						\$954,412 (at \$216.42/gsf)

3.5. Maximum Licensed Capacity

The diagram below illustrates the maximum possible licensed capacity of the childcare facility based upon the WAC minimum space-per-child requirements and square footage provided in the test-to-fit plan. The actual licensed capacity of the facility will be determined by the Department of Licensing based on an evaluation of the program, the ages and characteristics of the children, the experience of the staff and the usable floor space.



3.6. Test-to-Fit Program Plan

The test-to-fit program plan (figure 2) shows one possible program configuration. This floor plan was developed by Schacht Aslani Architects in collaboration with the SVC Task Force team. This plan meets the functional and spatial requirements of the program areas outlined above, and corresponds with the project budget and cost estimate developed during the feasibility phase. Other building and program configurations will be explored during the design phases.

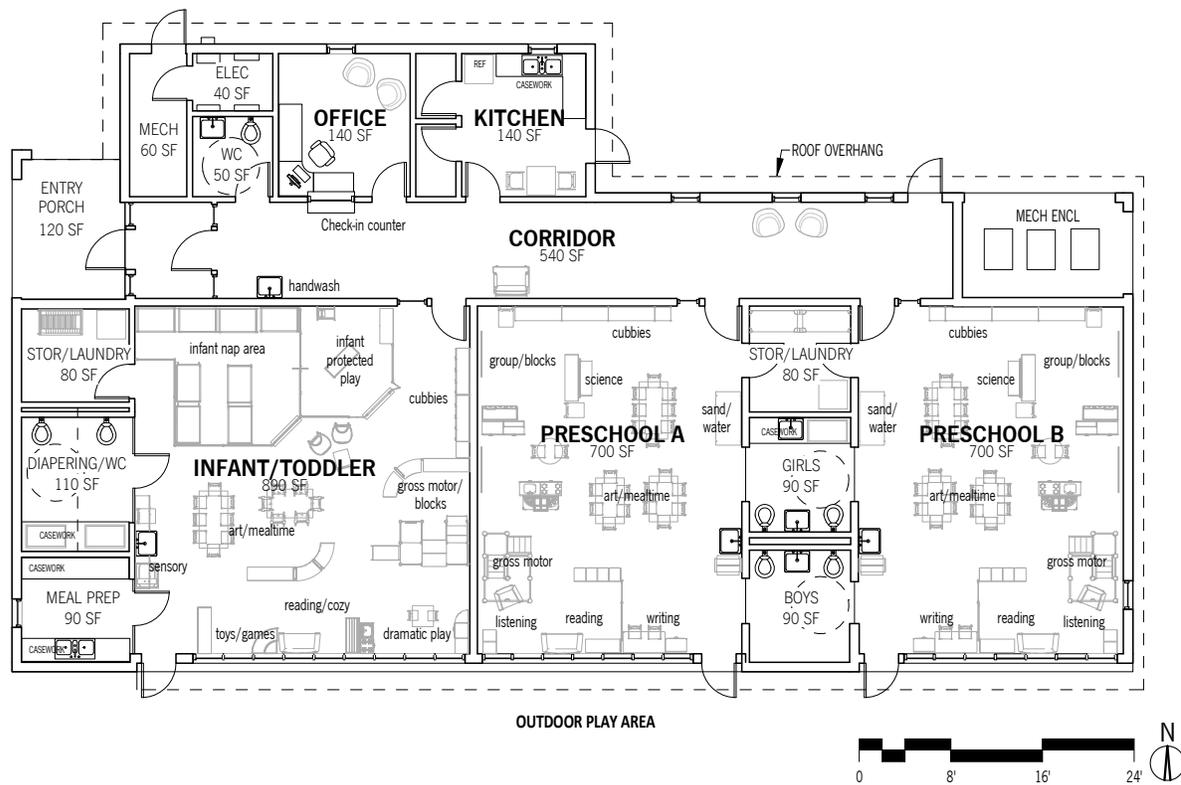
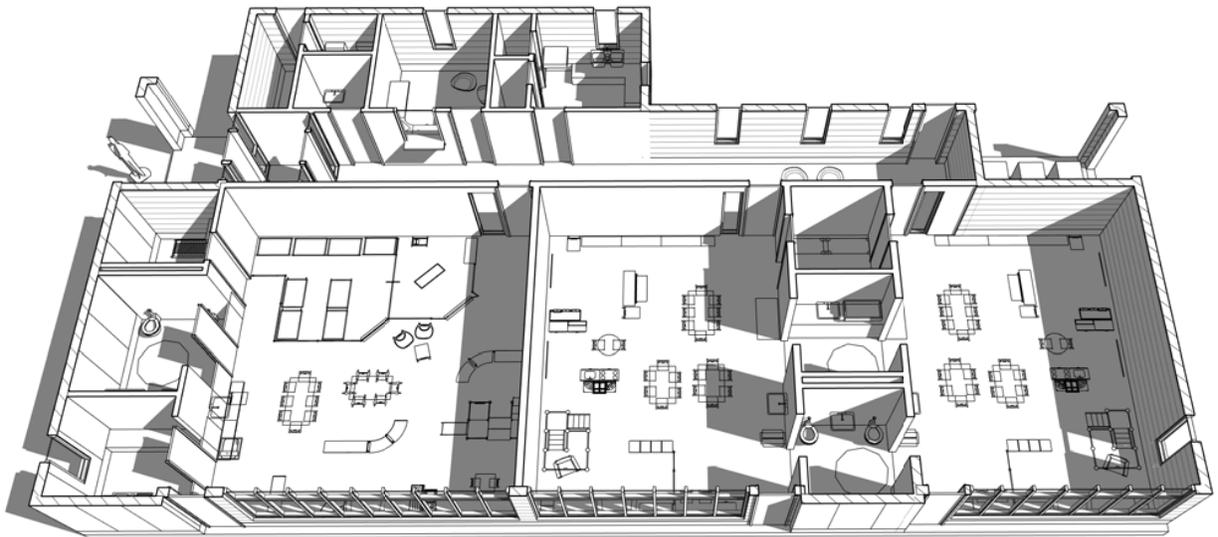


Figure 2. SVC Childcare Test-to-Fit Program Plan

4.0 Building Systems

The following paragraphs summarize the anticipated structural, mechanical, electrical, and communications project scope corresponding with the program and test-to-fit plan. Additional information can be found within the consultant reports in the Appendix.

4.1. Structural Systems

Building Enclosure

The primary structure will be conventionally-framed wood construction with TJI roof joists and stud walls. Exterior walls and the roof shall be sheathed with plywood for wind and seismic resistance. On the south wall, headers above the windows will be glulam beams. These members will carry the roof loads and resist wind forces from the windows.

Cold formed steel or glulam framing may be considered for the structure in place of wood if it is determined to be less expensive or more desirable. This decision will be made prior to development of construction drawings.

Foundations

The floor slab will be a reinforced concrete slab on ground and foundations will be spread footings. The relatively light loading of the soils associated with this building will provide some flexibility with the foundation design criteria. However, other campus buildings have required compacted fill soils below the footings if firm bearing is not achievable at shallow elevations. Soil conditions will be verified by a geotechnical engineer during the design phase.

4.2. Mechanical Systems

HVAC System

The Mechanical design will incorporate systems which will be low-maintenance, high-efficiency and durable.

Three split system heat pumps will be provided. They will provide independent heating and cooling for each of the three primary daycare spaces. Each system will consist of an outdoor unit located on a pad on the north side of the building. A pair of refrigerant pipes will connect each outdoor unit to an indoor air handling unit which will be located in the attic space above either the main corridor or the childcare classroom support spaces. Air will be ducted to ceiling diffusers in each space as well as adjacent ancillary spaces and the office. Air will be returned from the Infant/Toddler and Preschool Classrooms and the Office via ductwork. Restrooms, Diapering, Laundry/Storage rooms, and the Kitchen would be exhausted without recirculation. Outside air would be ducted to each unit independently from louvers on nearby exterior walls.

Dedicated fans handle the exhaust air for toilet rooms, diaper rooms, custodial rooms and any other spaces where excessive heat and/or odors are present. The exhaust fans can be located above ceilings near the area being served. Exhaust air will be expelled from the building through louvers on exterior walls.

Energy Management and Control System (EMCS):

The mechanical systems in the building will be controlled and monitored by an Energy Management and Control System (EMCS). In addition to controlling the mechanical equipment the EMCS will monitor and control other systems in the building. The EMCS can be connected to the central campus EMCS system for remote monitoring and control by maintenance personnel.

Plumbing Systems

The entering water size for the facility is estimated at 2-1/2" inches. A domestic water backflow device shall be located in the building within the mechanical room. Coordination with the local water utility will be completed during the preliminary design phase to determine water backflow requirements for domestic services.

Valving will be provided throughout the facility for proper maintenance and servicing of equipment. One electric water heater will be sized to handle the domestic water heating load.

Plumbing Fixtures

Plumbing fixtures will utilize low consumption components to minimize water usage. Water closets will use “dual flush” valves. Sinks and lavatories will use low flow aerators. Floor drains will be provided in all restrooms. Thermostatic mixing valves will be provided for all lavatories/sinks.

Fire Protection

The building will be fully sprinkled for fire protection. The design will be a wet pipe system in all interior areas with dry-type sidewall and/or pendant heads providing protection of the porch and the south roof overhang. Interior sprinkler heads will be quick response type with finish and style (recessed, concealed, etc.) to be coordinated during the construction documents phase. The building will have one fire service entrance at the mechanical room.

Fire Alarm

A fire alarm system will be provided to monitor the sprinkler system, mechanical smoke duct detectors and pull stations as required by code. Horn/strobe audible devices will be located throughout the building to provide alarm notification. The fire alarm panel will be connected to the campus networked fire alarm system, and will be located in the electrical room.

Energy Code

The project must meet the 2012 Washington State Nonresidential Energy Code, which requires the following:

- Mechanical ventilation must be provided throughout the building.
- Simultaneous heating and cooling is not permitted.
- Mechanical system efficiencies must meet the minimum requirements within the code.
- Mechanical systems provide economizer feature. (VRF systems are allowed some exceptions)
- Motors shall meet the minimum efficiency requirements and shall be ECM where required.
- Each mechanical system shall be provided with thermostat control.
- HVAC and plumbing systems shall be provided with insulation per the minimum code requirements.
- Motorized dampers shall be provided at all exterior openings.
- Water heaters shall be insulated per the minimum requirements based on capacity.
- Water heaters shall meet minimum efficiencies based on heating capacity and size of storage.
- All showers and lavatory faucets shall be equipped with flow control devices.
- Building envelope requirements shall meet minimum performance requirements.

4.3. Electrical Systems

Capacity and Panel Configuration

The service voltage will be 208/120 Volts wye, 3 phase, 4 wire. The preliminary service size for the project is 225 Amps, and includes provisions for building lighting, mechanical and miscellaneous power loads.

A service entrance panel and utility metering enclosure will be provided in the electrical room. The utility power meter will be mounted at the building exterior outside of the electrical room. The electrical panel will have bolt-on circuit breakers and a copper bus.

Lighting

Lighting will be designed to meet codes and building functions and will also consider energy efficiency, controllability and daylighting integration. Specific fixture types will be reviewed in subsequent design phases.

Fixtures will utilize fluorescent or LED lamps. All ballasts shall be electronic, energy saving and low harmonic. Dimmable fixtures will be used in automatic daylighting control zones.

Lighting Controls

The project must meet the 2012 Washington State Nonresidential Energy Code, which requires the following:

- Local lighting controls shall be installed within each space.
- Lights within daylight zones require automatic dimming control within classrooms, corridors, offices, etc.
- Automatic lighting controls are required to shut off exterior lighting via a timeclock or photocell.
- Automatic lighting controls are required to shut off interior building lighting.
- Occupancy sensors are required in classrooms and in offices smaller than 300 sf.
- Spaces with occupancy sensors shall have a manual switch for shutting lights off.
- Lighting controls shall be commissioned.
- Lighting power allowances shall not exceed the following:
 - Exterior parking / outdoor areas: 0.10 Watt/square foot
 - Building exterior: 0.16 Watts/square foot
 - Interior: 0.99 Watts/square foot

Emergency Power/Lighting

Emergency lighting shall consist of selected fluorescent fixtures equipped with integral emergency ballasts. All exit signs will be equipped with a battery unit and test switch.

4.4. Communications / IT Systems

Telecommunications

A telecommunications fire-treated backboard in the electrical room will serve as the demarcation point and as main cross-connect location for the horizontal cabling infrastructure. A wall mounted telecommunications enclosure will be provided. Access control, perimeter detection and CCTV security panels (if desired) will also be located within this room.

Cabling Standards

Horizontal cabling will be category 6 minimum, four pair, plenum, 24-gauge solid copper conductors. Outlets will be Category 6, 8 position, 8 conductor modules. Conduit will be used for all concealed horizontal cable runs. J-hook open support system will be used above accessible ceilings. Specific data/voice outlet quantities will be coordinated in subsequent design phases.

Access Controls

The security systems will include door access card readers and exterior door contacts. Specific security device locations will be coordinated with the Owner in subsequent design phases.

Wireless Access Points

Wireless access points will be provided as needed to serve all interior spaces.

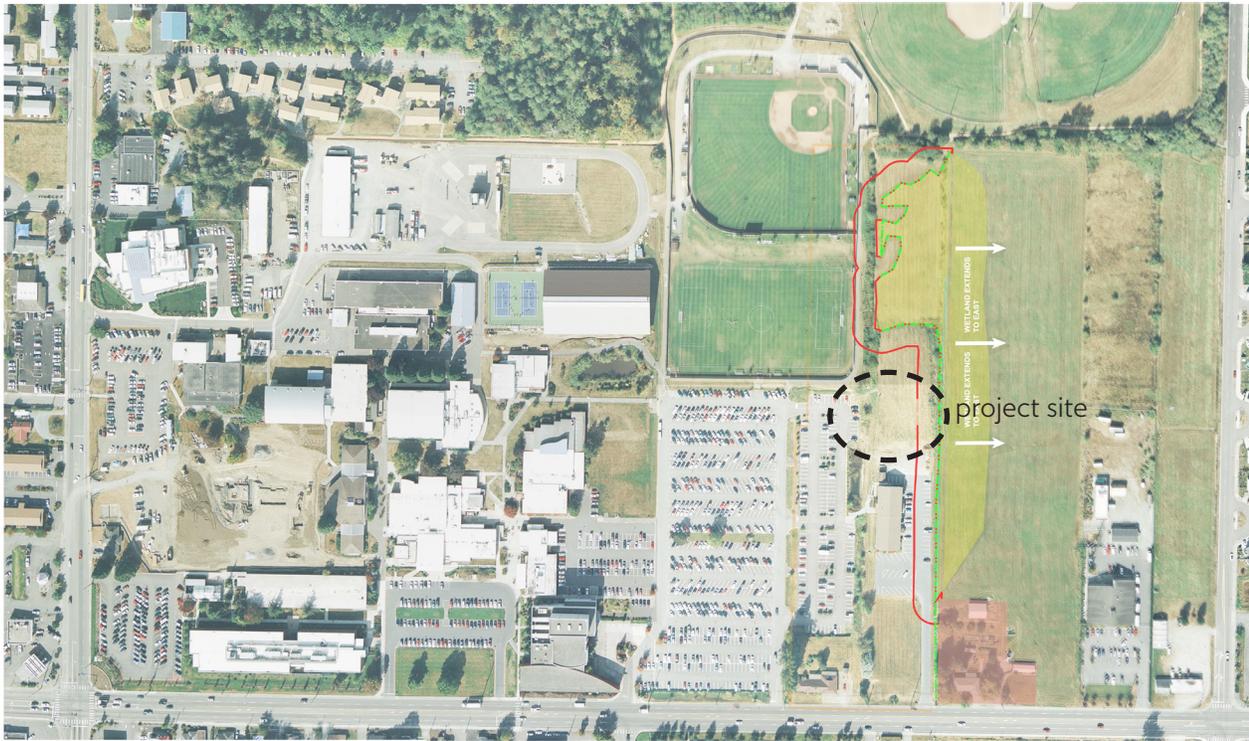
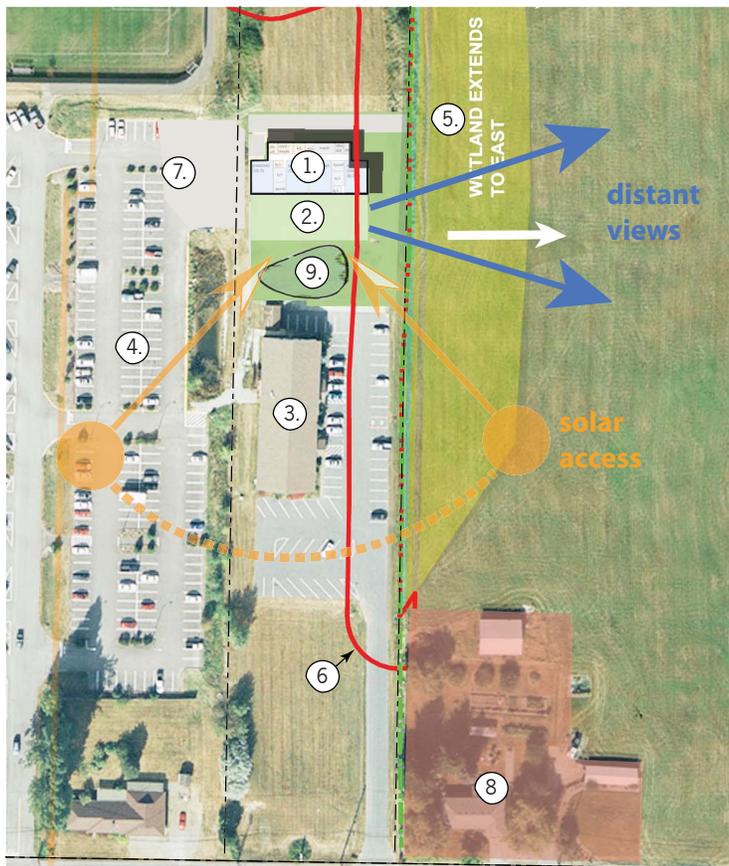


Figure 3. Existing Campus Aerial with Project Site Located



keynotes

- ① Childcare Center
- ② Childcare Play Yard
- ③ Existing Church Building
- ④ Existing Parking Lot
- ⑤ Existing Wetland
- ⑥ Existing Wetland Setback (50 ft)
- ⑦ Drop-off and short-term parking area
- ⑧ Rodgers Property Deed Restriction
- ⑨ Potential Surface Stormwater Treatment



Figure 4. Initial Site Analysis of Project Site

5.0 Site Overview

5.1. Location & Character

Project Site Location

The project site for the SVC Childcare Center is located in the southeast corner of the Skagit Valley College Campus in Mt. Vernon, Washington. The site is located just north of the existing East Campus Building, off East College Way and is approximately 20,000 sf in total area. Figure 3 shows the project site in relation to the existing Mount Vernon campus.

Properties Affected

The properties that contain the site form a roughly rectangular assemblage of two parcels (P25052 and (P25055) that is approximately 9.7 acres in size. Both parcels are owned by the College. The adjacent County parcel to the east (P25048) is also approximately 9.7 acres in size and is currently undeveloped. The College-owned parcels and the County-owned parcel are bordered on the south by East College Way. Refer to the Appendix for a detailed topographic survey showing the boundaries and extents of the two parcels affected by the proposed site development. Relevant portions of these parcels are also shown in figure 5 on the following pages.

Site Access and Character

The project site enjoys direct access to the adjacent main campus parking lot, and vehicular access to East College Way will be provided through this existing parking lot's main drive aisle. Primary pedestrian access to the main campus will be via the existing campus path that runs along the southern and eastern edge of the soccer and baseball fields. It is assumed that most parents will utilize dedicated pick-up and drop-off spaces on the project site and then re-park their cars elsewhere on campus. The existing unimproved access to the parking lot spaces along the north side of the East Campus Building will be maintained.

Distant views of the Cascade range and foothills dominate the site experience to the east. Views to the north are pastoral in character looking over the wetland area and former farm fields. Views to the south are of the East Campus building and to the west is the parking lot. Figure 4 shows an initial site analysis diagram of the childcare site including solar access, parking expansion, and building and site element orientation. Other possible configurations will be explored during the design phases.

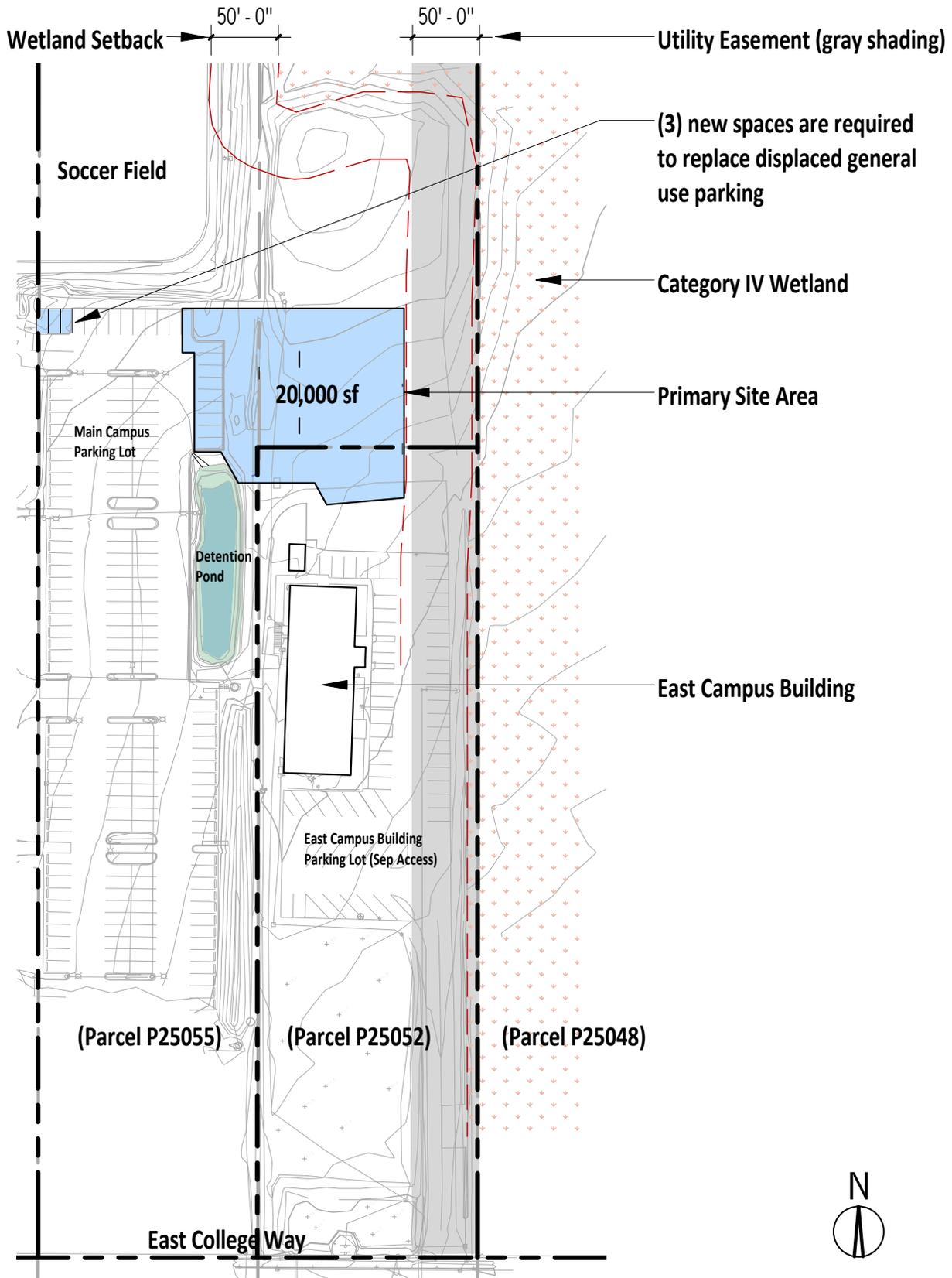


Figure 5. Existing Site Conditions and Topography

5.2. Site Restrictions

Topography & Soils

The primary site development area is generally flat, sloping gently to the southeast. Soils are elevated and well-drained. Wetland areas are found to the north and east of the site area. Figure 5 shows the existing site topography, local improvements and the proposed childcare center site development area. The relatively light loading of the proposed building will allow for flexibility with regard to foundation design. A geotechnical investigation will be conducted during the design phase to establish the soil bearing capacity and other characteristics.

Observed Wetland Areas

A wetland area was identified on Parcel P25055 north of and abutting the filled (high spot) area. The extent of the wetland boundary is shown in figure 5, and documented in the wetland survey found in the Appendix. Hydrology for this wetland may be supported, in part, from water within the western ditch of parcel P25055. This ditch, which is part of the existing drainage system which leads eventually to storm drainage at East College Way, appears to have filled in with sediment and now allows surface water to flow onto the wetland area. The wetland extends offsite onto the adjacent County parcel to the east of the site. A previous consultant had identified approximately 28 wetlands on the adjacent County parcel. These wetlands are actually connected into one contiguous wetland.

The wetland observed is a Category IV wetland, based on the Washington State Wetland Rating System for Western Washington (Hruby 2006). Based on City of Mount Vernon Code, this wetland has a 50-foot buffer measured from the delineated wetland edge. Figures 3, 4 & 5 illustrates the approximate extent of the wetland edge and the required buffer in relation to the childcare center site.

It is assumed that wetland mitigation will not be required for this project because the site development can be located outside of the wetland and wetland buffer. Future projects that do impact these wetland areas will be required to engage in wetland mitigation or functional replacement.

Utility Easement

A 50-foot utility easement runs north-south along the eastern edge of both College parcels from E College Way to the county ballfields. This easement is shown in figure 5 as a gray hatch. This easement roughly corresponds with the required 50-foot wetland buffer associated with the category IV wetland described above. This easement does not interfere with the proposed location of the childcare center building, and it is assumed that the required utility connections will be allowed within this easement area within the existing East Campus Building parking lot. This easement does restrict development further to the east and may need to be renegotiated to accommodate future larger projects.

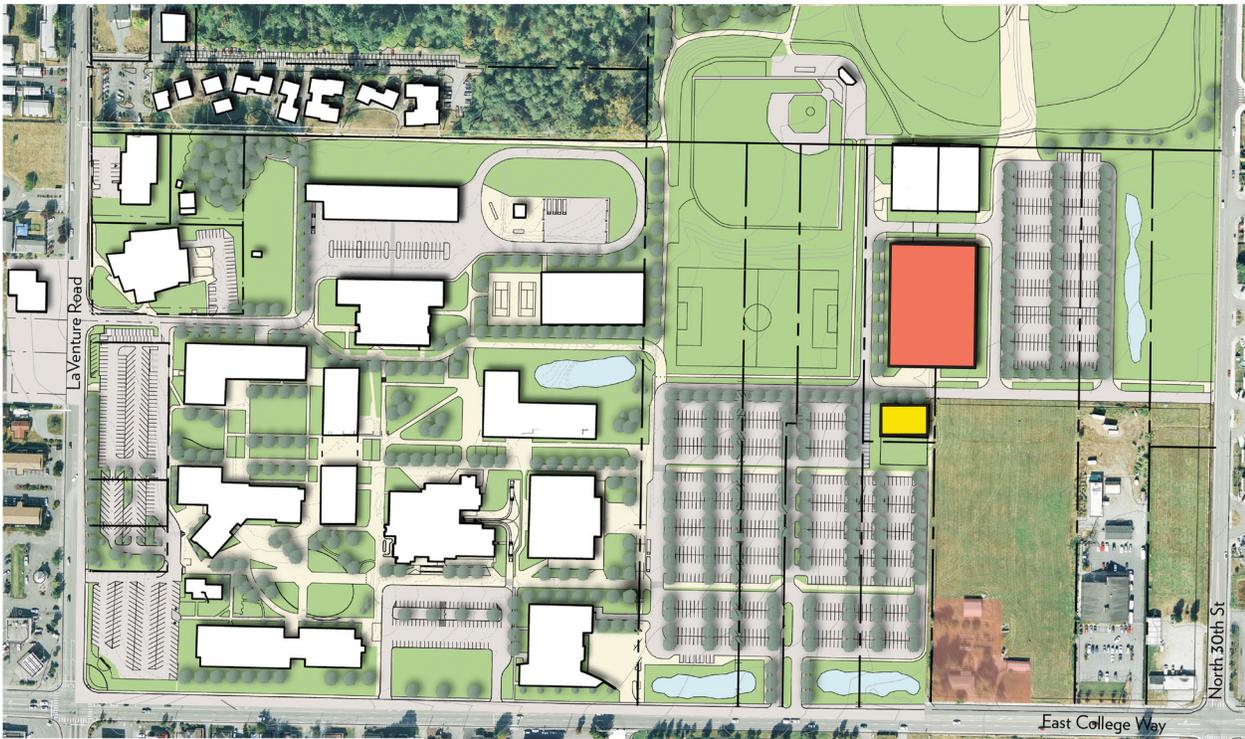


Figure 6. SVC Master Plan Long Term Development Plan (unmodified)

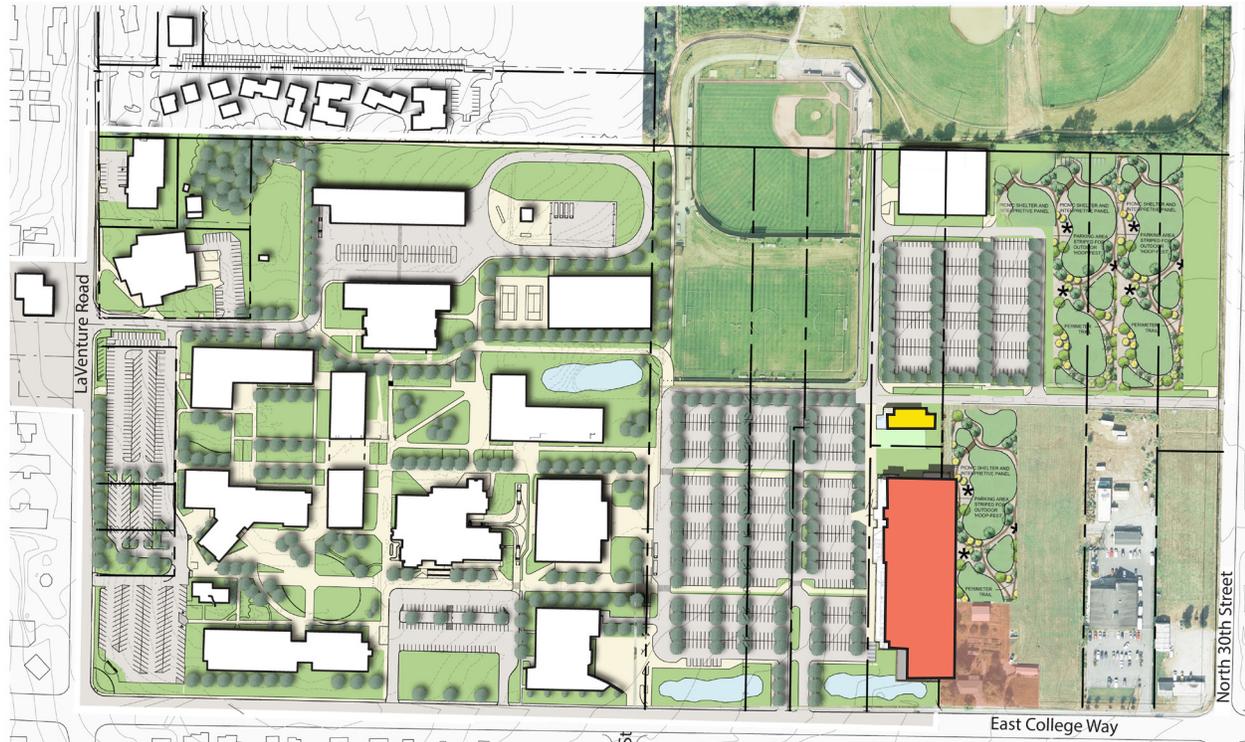


Figure 7. Long Term Development Plan with alternate YMCA location (modified)

- YMCA
- SVC Childcare
- Other campus buildings

5.3. Coordination with Future Development

A comprehensive coordination study of the long-term development possibilities for this portion of campus is not within the scope of the feasibility study. However, the following adjustments and assumptions were made regarding the likely evolution of the current SVC Master Plan based on college and YMCA input. Further exploration and a Long-Range Development Plan update should be explored in a future study.

Long-Range Development Plan (LRDP)

The SVC Master Plan's Long-Range Development Plan (see figure 6) was last updated in 2013. The LRDP identified the potential location for the childcare center on campus, and this site was chosen for the feasibility study. The building occupies a prominent location on the eastern edge of the proposed parking lot redevelopment, along a future vehicular and pedestrian circulation route leading to the proposed future YMCA facility, fieldhouse, and ultimately to N 30th Street.

Coordination with the future YMCA Building

The childcare center and the future YMCA building to be located in this portion of campus need to be coordinated because these buildings will likely enjoy some shared programming once both are developed. During the course of the feasibility study, it was determined that the YMCA's future location may vary from that identified in the SVC Master Plan LRDP. This repositioning is primarily driven by a desire on the part of the college and the YMCA to locate the YMCA building closer to East College Way. In this alternate position, the YMCA building would benefit from greater visibility from East College Way and a stronger "front-door" relationship to the existing campus. A concept drawings showing the alternate location was prepared to test the potential set of relationships and to determine whether this alternate YMCA location would preclude the development of the childcare center (see Figure 7).

It was ultimately determined that the childcare center could remain in the same location in this alternate scenario. In fact the connection between these two building is strengthened because they can be connected directly without the need to cross the east-west vehicular circulation. The front facade of the childcare center is set back from the drop-off parking area to allow for a potential connecting element or pedestrian walkway to the future YMCA building if it is located in the alternate position. The childcare center building is also held far enough south to allow for the future addition of the east-west connection shown in the both the LRDP and the alternate diagram. The additional parking displaced by the YMCA is relocated northeast of the childcare center in the space vacated by the previous YMCA position.

The development of the YMCA, fieldhouse, and new parking in this area of campus will impact the existing category IV wetland. It is assumed that the required wetland mitigation could be accomplished in conjunction with a future project of that scale.

Utility Coordination

If the alternate location is chosen for the YMCA, the development of that project will interrupt the utilities serving the new childcare center. The capacity of the YMCA utility connections must be sized to also accommodate the childcare center's needs, and a utility corridor should constructed prior to the interruption to minimize disruption to the childcare center. Coordination of this changeover should be included in the planning for the future YMCA building if the alternate site is chosen. The possibility of relocating independent utilities outside of the future development zone was explored but deemed to be too costly and too speculative for inclusion in the childcare center project.

5.4. Test-to-Fit Site Plan

The test-to-fit site improvement plan below (figure 8) is a composite site plan which includes all of the anticipated site elements. These elements include: the entry and drop-off area (1), dedicated staff parking area (2), the children’s play area (3), the rainwater swales required for water quality treatment and detention (4), and the primary utility connections (5). Detailed descriptions can be found on the following pages and additional information can be found in the Appendix.

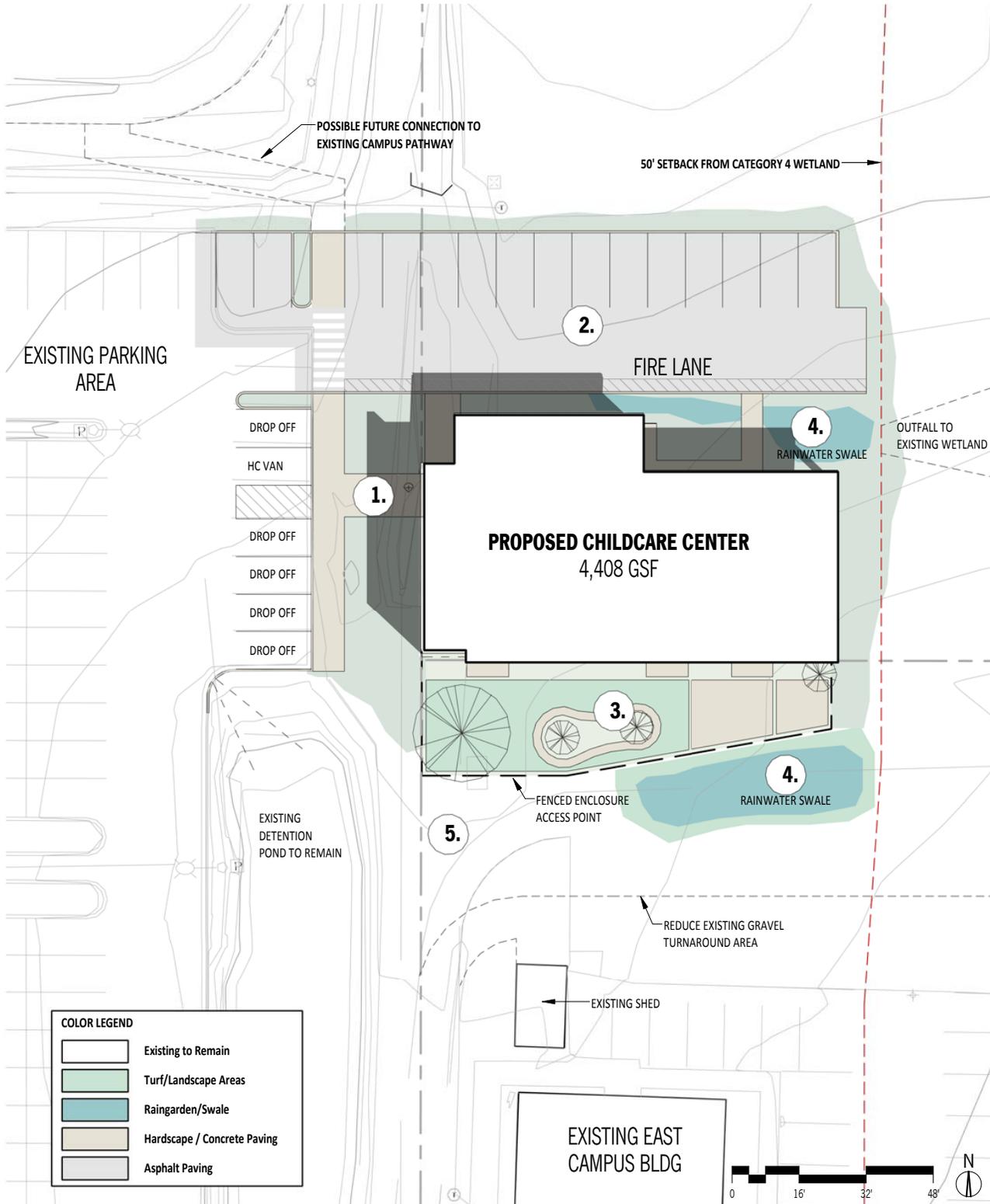


Figure 8. Test-to-fit Site Improvement Plan

6.0 Site Improvements

6.1. Civil Scope & Utilities

Figure 9 on the facing page is a civil site diagram of the proposed utility connections. Summary descriptions of each of the major systems is included below. Detailed information can be found in the Appendix.

Excavation

The site mildly slopes from the northwest to the southeast. With the building located in the middle of the site, there is an anticipated amount of cut on the north side of the building and fill to the south. A proposed detention pond for stormwater flow control will need to be excavated to a depth of 2.5 feet. All usable cut material will be utilized, if conditions allow, for fill material on site. The site should be designed to minimize export of on-site soils or import of structural fill.

Stormwater System

The City of Mt. Vernon follows the Washington State Department of Ecology Manual 2005 stormwater regulations. Due to topographic constraints, the site is divided into two drainage basins: the north and south.

The north portion of the site area is a proposed staff parking area for the childcare center. This parking lot area will require stormwater treatment and flow control because it is classified as a new impervious, pollution-generating surface. Acceptable means of treatment include biofiltration swales, a coalescing plate oil/water separator, and other methods described in the Department of Ecology, Stormwater Management Manual for Western Washington. The test-to-fit site development plan proposes a biofiltration swale in the southeast corner of the parking lot to treat runoff from the pollution generating surface before discharge. After routing through the bioswale, the water is then sheet-flow dispersed via its natural drainage pattern to the existing wetland area to the east of the site.

Preliminary review of the site and the proposed development indicates a detention system will need to be implemented. It was found that the most economical stormwater detention system would be a surface detention pond to the south of the proposed building. The detention pond will have a volume based on 50% of the two-year up to the 50-year storm event in the region. Stormwater runoff from the development will be collected and conveyed to the detention pond via typical 6" storm drainage pipes. A control structure will release the runoff from the detention pond at acceptable release rates prior to discharging into the existing conveyance system to the west of the site. This existing storm system runs south and combines to the storm main in East College Way. All areas collected and routed to the detention pond are considered "clean discharge" and therefore are not required for water quality treatment.

There is an existing open ditch conveyance system that runs through the proposed development. As part of this project, a 12" culvert system will be implemented to reroute the storm system around the site.

Electrical

The building will be connected from the existing Puget Sound Energy underground distribution that currently serves the East Campus Building and adjacent east parking lot. The approach is to arrange with PSE for a new utility pad mount transformer adjacent to the building connected from the existing East Campus Building transformer. This approach is subject to PSE approval of an additional pad mount transformer. If PSE does not approve an additional transformer, secondary service could be connected from the existing pad mount transformer. In this case the transformer may need to be replaced by PSE depending on capacity.

Communications/IT

A campus-owned telecommunications vault is currently located north of the site which can be utilized for telecommunications connection to the childcare building. Existing 4" underground conduit infrastructure interconnects this vault with Roberts Hall. Single mode fiber optic cabling and multi-pair copper cabling will be

extended in existing conduit from Roberts Hall to the existing vault, and in a new 3" conduit from the vault to the childcare building.

Fire & Domestic Water

Similar to the sewer for the project, there are existing water mains in East College Way and in the east campus building site located just south of the proposed project. It has been determined it is most economical to tie into the existing 8" water line in the east campus building parking lot. This water main will be routed north allowing a domestic water line, fire service and a fire hydrant.

The domestic water service will be provided to the new building and a water meter will be required per current City of Mt. Vernon standards. Fire sprinkler service is assumed to be required for the new building with a new Double Detector Check Valve Assembly (DDCVA) fire service inside the building and a Fire Department Connection (FDC) strategically located on site.

Sanitary Sewer

Sanitary sewer service will be required for the new building. There are existing sewer lines that run in East College Way and in the previously developed East Campus Building, located directly south of the proposed child care center. Because the East Campus Building sewer line is located much closer than East College Way, it is anticipated the most economical design would be to tie into this existing sewer pipe that later ties into the sewer main in East College Way. There would be some anticipated asphalt pavement restoration as part of this connection through the existing parking lot.

A project alternate has also been considered to route a new sewer main from the child care center all the way to East College Way. This would be done in anticipation of a future project which would likely be constructed over the existing east campus building sewer to the immediate south of the child care center. This alternate would require a significant amount of sewer pipe, and asphalt restoration.

Gas

Gas service will be provided to the childcare center and will be connected to the existing gas line at the east campus building. A gas meter will be mounted on the southwest side of the building.

6.2. Vehicular and Pedestrian Access

Access to the childcare center will primarily be vehicular for child pickup and dropoff. The proposed site improvements include five dedicated drop-off parking spaces that are intended for this purpose. The existing eastern parking lot will be re-striped to accommodate these stalls, and a connection to a new staff parking area and fire lane will be created along the north side of the childcare site.

Pedestrian access to the childcare center will be primarily through the existing parking lot. A campus pathway exists to the north of the site, and there is potential for a direct pedestrian connection to that existing path. This would provide for direct pedestrian access without the use of the vehicular circulation system, and would allow the staff to take groups of children to the northern portion of campus without crossing the parking areas. A conceptual location for this pathway is shown, and integrated into the staff parking area. The design of this connection (grading and profile) will be explored further during the design phase.

The existing vehicular circulation network on campus provides access to College Way. Additional campus wayfinding signage may be required to facilitate vehicular and pedestrian wayfinding.

Parking

The childcare center use requires dedicated staff parking (one stall per staff member), pick-up and drop-off stalls for parent use, one HC van parking stall, and replacement stalls for any campus parking stalls displaced by the proposed design. At the current staff to student ratios, nine staff parking stalls will be required.

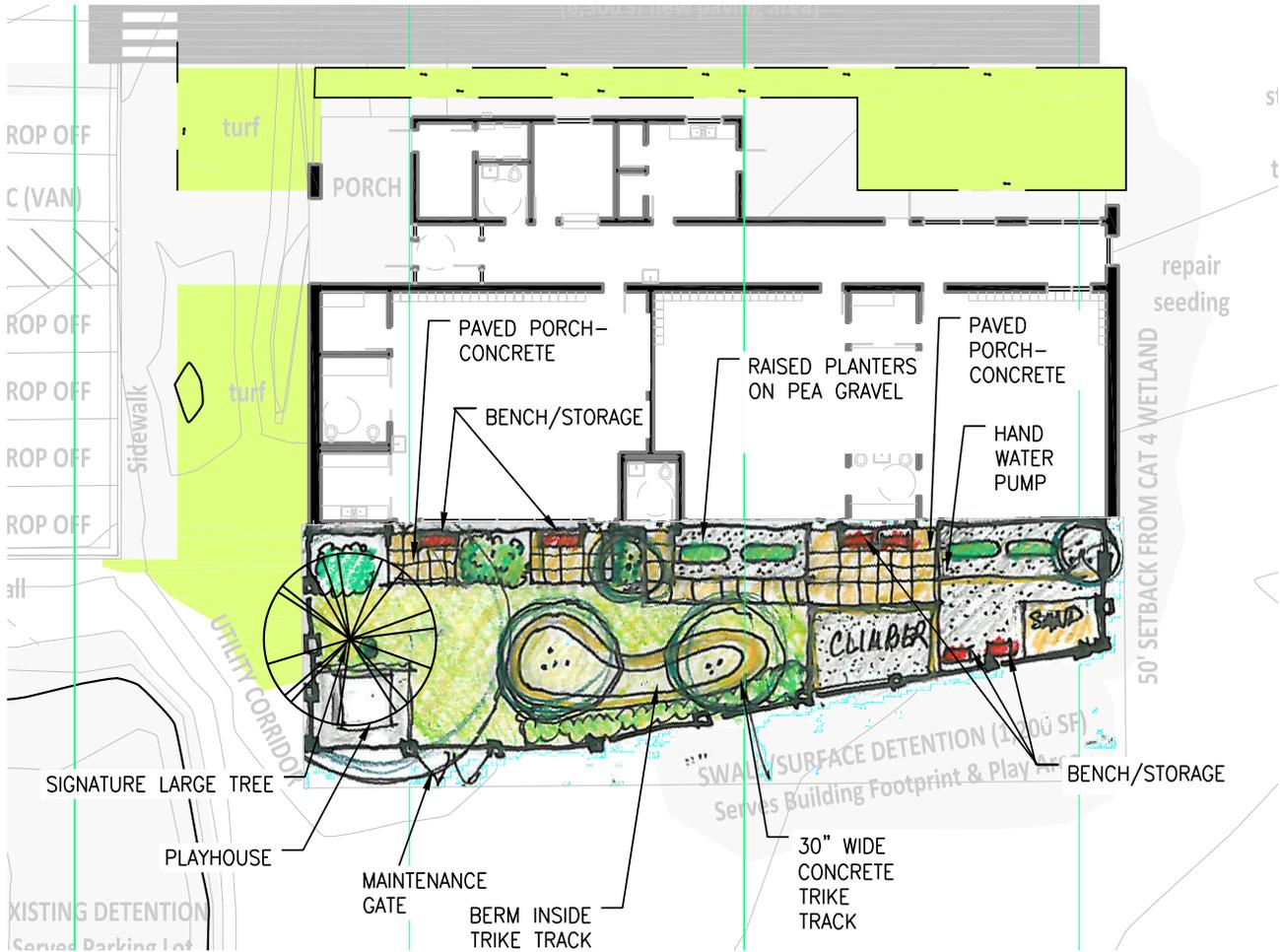


Figure 10. Outdoor Play Area Landscape Concepts

6.3. Landscape Improvements

Children's Play Area

Early learning environments for children have always placed high value on access to natural areas, and in the last ten years the role of nature has been shown to have a significant impact on learning. Instead of sole dependence on play equipment, the playground will include planting and well-defined lawn areas. Woven into the fabric of the more 'naturalized' play area is a spectrum of functional areas that will provide multiple means of physical and social learning for the three age groups. The types of spaces include transitional spaces between indoors and outdoors, imaginative/ dramatic play areas, sensory learning areas, and big muscle play areas.

Transitional spaces act as porches for cleaning off prior to entering the building, provide covered spaces for small art projects or rainy day activities, and serve as a space to take a child that needs a moment away from the group. These spaces will be located outside of each door from the courtyard and include a bench or storage area. While the spaces are defined as "owned" space, outside each door the edges will be defined with moveable planters or benches but not fencing in order to provide staff with flexibility in programming their spaces.

Imaginative play spaces are smaller spaces that allow for social interaction and emotional and intellectual development. Features include small paved area for the infants, play houses, fences, and raised planters (galvanized metal troughs), sand boxes and a small climber.

Sensory learning includes the water feature, smells of herbs and aromatic plants, the sound of wind blowing through tall grasses, the feel of sand and dirt in the fingers.

Big muscle play areas - opportunities for climbing, trike-riding and ball play spaces for both the toddlers and pre-K children, including a crawling lawn for the infants and "pre-walking" rail for young toddlers. New pathways, ramps and hill slide (less than 30" tall) will provide physical challenges for the pre-K children.

In addition, outdoor storage areas for the wheel toys, trikes and toys, balls and sandbox toys will be included. The storage areas will be located adjacent to the areas they serve – i.e. trike and wheel toys adjacent to the trike track or wheel toy areas and ball storage near ball play areas, etc.

Plant Material

The plant material will include hardy native and ornamental plants that are known for their ability to survive our dry summers and wet winters. Plants will include both native species and vegetation that add seasonal, fragrant, and textural interest to the site. Plant materials will be chosen with young children in mind. Plants with thorns, poisonous leaves or berries, or that attract bees or wasps will not be used. Plants that have interesting smells, colors and diversity in scale and texture will be included to demonstrate the variety of plants found in the natural world. All plants will be 5-gallon and 10-gallon in size. Six inches of soil in turf areas and twelve inches of soil in planting beds will be typical. The play yard, erosion control/restoration areas and the front entry will utilize compost-amended soil. Landscape areas on the east side of the building and at the north will also utilize this material.

Irrigation

Irrigation will be provided for establishment of the plant materials and can be abandoned after two or three years if desired (except for the lawn zones). The system will be designed to be efficient by combining plants of similar watering requirements, most of which will be drought tolerant into appropriate zones, and scheduling the irrigation controller to deliver rates of watering appropriate to the needs of the plants. Irrigation for all planting beds.

Site Lighting

Site lighting will include metal halide or LED pole mounted fixtures at parking area, and compact fluorescent or metal halide area fixtures at pedestrian circulation areas.

Site lighting fixtures will be controlled through a photocell and contactor. Automatic controls of interior fixtures will be through occupancy sensors. Fixtures within daylighting zones will be connected to daylight controllers and configured for automatic dimming control.

PROJECT: Skagit Valley College Child Care Center
 Address: Mount Vernon, WA

Project delivery analysts, llc
 9001 Springwood Avenue NE, Bainbridge Island, WA 98110

Feasibility Phase Cost Summary

Page No.: SUMMARY SHEET
 Date: 13-Mar-14

4,408 SF

21,780 SF

0 SF

0 SF

Estimate By: WPJ
 4,408 SF

ITEM	DESCRIPTION	CHILD CARE CENTER		SITework		OFFSITE		NOT USED		LINE TOTALS	
		COST	\$ / SF	COST	\$ / SF	COST	\$ / SF	COST	\$ / SF	COST	\$ / SF
DIRECT HARD COSTS											
1.	Off-Site Improvements	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00
2.	Sitework: Demo/Earthwork/Utils.	\$ 0	\$ 0.00	\$ 169,167	\$ 7.77	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 169,167	\$ 38.38
3.	Hardscapes/Parking	\$ 0	\$ 0.00	\$ 51,179	\$ 2.35	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 51,179	\$ 11.61
4.	Site Specialties	\$ 0	\$ 0.00	\$ 20,000	\$ 0.92	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 20,000	\$ 4.54
5.	Landscape/Softscape	\$ 0	\$ 0.00	\$ 24,709	\$ 1.13	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 24,709	\$ 5.61
6.	Foundations	\$ 52,309	\$ 11.87	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 52,309	\$ 11.87
7.	Vertical Structure	\$ 9,603	\$ 2.18	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 9,603	\$ 2.18
8.	Floor and Roof Structure	\$ 46,094	\$ 10.46	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 46,094	\$ 10.46
9.	Exterior Cladding	\$ 108,598	\$ 24.64	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 108,598	\$ 24.64
10.	Roofing and Waterproofing	\$ 48,401	\$ 10.98	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 48,401	\$ 10.98
11.	Interior Doors and Partitions	\$ 55,636	\$ 12.62	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 55,636	\$ 12.62
12.	Interior Finishes	\$ 59,116	\$ 13.41	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 59,116	\$ 13.41
13.	Fixed Equipment and Casework	\$ 19,541	\$ 4.43	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 19,541	\$ 4.43
14.	Furnishings	\$ 3,068	\$ 0.70	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 3,068	\$ 0.70
15.	Vertical Transportation	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00
16.	Fire Protection	\$ 23,625	\$ 5.36	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 23,625	\$ 5.36
17.	Plumbing	\$ 58,384	\$ 13.25	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 58,384	\$ 13.25
18.	HVAC	\$ 117,782	\$ 26.72	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 117,782	\$ 26.72
19.	Electrical	\$ 132,655	\$ 30.09	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 132,655	\$ 30.09
DIRECT SUBTOTALS		\$ 734,810	\$ 166.70	\$ 265,055	\$ 12.17	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 999,865	\$ 226.83
INDIRECT HARD COSTS											
20.	Escalation - not included	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00
21.	General Conditions @ 8%	\$ 58,785	\$ 13.34	\$ 21,204	\$ 0.97	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 79,989	\$ 18.15
22.	Bond and Insurance, B&O @ 3.2%	\$ 25,395	\$ 5.76	\$ 9,160	\$ 0.42	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 34,555	\$ 7.84
23.	Builder Fees @ 4%	\$ 32,760	\$ 7.43	\$ 11,817	\$ 0.54	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 44,577	\$ 10.11
24.	Estimating contingency @ 12%	\$ 102,210	\$ 23.19	\$ 36,868	\$ 1.69	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 139,078	\$ 31.55
INDIRECT SUBTOTALS		\$ 219,149	\$ 49.72	\$ 79,050	\$ 3.63	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 298,199	\$ 67.65
GRAND TOTALS		\$ 954,000	\$ 216.42	\$ 344,000	\$ 15.80	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 1,298,000	\$ 294.48

ALTERNATES:

1.	Restore radiant heat to infant/toddler classroom 890 GSF	\$ 13,300	\$ 3.02
2.	Replace cement panel at west façade with brick veneer	\$ 16,900	\$ 3.83
3.	Increase classroom size by 10% each (250 GSF total area)	\$ 43,300	\$ 9.82
4.	Add 500 SF covered outdoor space / porch @ \$40 / SF	\$ 20,000	\$ 4.54
5.	Reduce classroom size by 200 sf (200 GSF total area)	\$ (34,640)	\$ (7.86)
6.	Delete infant care program space (400 GSF total area)	\$ (69,280)	\$ (15.72)
Subtotal of Upgrades and Alternates		\$ (10,420)	\$ (2.36)

SOFT COSTS - BY OWNER

25.	Primary Design Consultants	\$ -	\$ -
26.	Hazardous material report and handling	\$ -	\$ -
27.	Soils reports and borings	\$ -	\$ -
28.	A/V plus Graphic Production fees	\$ -	\$ -
29.	Reproducibles	\$ -	\$ -
30.	Testing and Inspections	\$ -	\$ -
31.	Furniture, equipment, artwork	\$ -	\$ -
32.	Permits and Fees	\$ -	\$ -
33.	Utility Company Charges	\$ -	\$ -
34.	Legal Services	\$ -	\$ -
35.	WA State Sales Tax	\$ -	\$ -
36.	Owner's Insurances	\$ -	\$ -
37.	CM Fee	\$ -	\$ -
38.	Other Admin. And O.H. Costs	\$ -	\$ -
39.	Marketing and Advertising	\$ -	\$ -
40.	Soft Cost Contingency	\$ -	\$ -
41.	Warranty Expense / Post Const.	\$ -	\$ -
SOFT COST TOTALS		\$ -	\$ -

INFORMATION ITEMS:

1.	General Conditions, per month, for information purposes only:	\$ 8,888
2.	All costs in today's dollars; not escalated.	
3.		

SPECIFIC EXCLUSIONS:

1.	Handling and disposal of hazardous materials
2.	Utility meters and fees are by Owner
3.	Loose fixtures, equipment and furnishings
4.	Offsite work
5.	Other soft costs as shown to the right.
6.	

GRAND TOTALS (Not Incl Alternates)	\$ 1,287,580	\$ 292.10
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*NOT INCLUDING FINANCING COSTS

Figure 11. Cost Estimate Summary

7.0 Cost Estimate

7.1. Methodology

The cost estimate was prepared using the Estimate Set of drawings, the consultant reports and the outline specifications. Six potential alternates were also evaluated. The Maximum Allowable Construction Cost (MACC) of \$1,302,000 used in the project budget includes the Site Development Costs, Building Costs, and Deductive Alternate 5 outlined below. The remaining alternates may be considered further during the design phases. Figure 11 is the summary sheet from the cost estimate and includes all the major elements.

Site Development

Includes all landscape improvements, required utility connections, stormwater elements, the children's play area, expansion of the parking areas and connections to the existing vehicular circulation. Site development costs do not include wetland mitigation (not required) or the future connection to the existing campus pathways.

Building Construction

The building construction portion of the project cost includes the building exterior and shell, all interior building improvements, and all structural, mechanical, electrical and communications systems scope. To balance the project budget, Deductive Alternate number 5 was selected, reducing the overall building footprint by 200 sf.

Additive Alternate 1: Radiant Heat

Includes re-introduction of the radiant floor heat amenity to the infant/toddler classroom. This is not a code requirement, but helps to avoid cold floors in the spaces where the age group tends to spend more of their time on the floor crawling or playing. This price reflects the cost to add the radiant heat tubing to the slab, necessary manifolds and controls, circulation pumps, and electric fluid heating equipment.

Additive Alternate 2: Brick Veneer on West Facade

Includes replacement of the fiber cement panel system currently indicated on the west facade (entry facade) of the building brick veneer. This would introduce a more durable material to the entry facade on the side facing the main campus. This material aligns with the campus architectural standards outlined in the Campus Master Plan.

Additive Alternate 3: Increase Classroom Sizes by 10%

Includes a net square footage increase of each of the classrooms by 10% of their current area. Because the classrooms are shown at code minimum size for the maximum number of children, this additional space would not increase capacity, but would allow for additional activity space and flexibility in the furniture layout and operation of the childcare rooms.

Additive Alternate 4: Outdoor Covered Space

Includes the addition of an outdoor covered canopy in the children's play area. This canopy would provide additional weather protection and would facilitate outdoor activities during the shoulder seasons. This covered area could be incorporated into the building or could exist as a stand alone structure. Outdoor storage could also be incorporated into this element. This alternate was not included in the cost estimate but was identified as a high priority item to re-incorporate during the design phases.

Deductive Alternate 5: Reduce Infant/Toddler capacity

Includes deletion of 200 net square feet from the shared infant/toddler classroom, which would reduce the infant capacity (assuming minimum square footage per infant of 50 sf) from eight total infants to four total infants.

Deductive Alternate 6: Reduce Infant/Toddler capacity

Includes deletion of 200 net square feet from the shared infant/toddler classroom, which would reduce the infant capacity (assuming minimum square footage per infant of 50 sf) from eight total infants to zero total infants.

7.2. Estimate Set of Drawings

A detailed Estimate Set of drawings was developed of the selected test-to-fit program scheme for the purposes of developing a detailed cost estimate. This set of drawings was used for takeoffs and material quantities. A copy of the Estimate Set can be found in the Appendix.

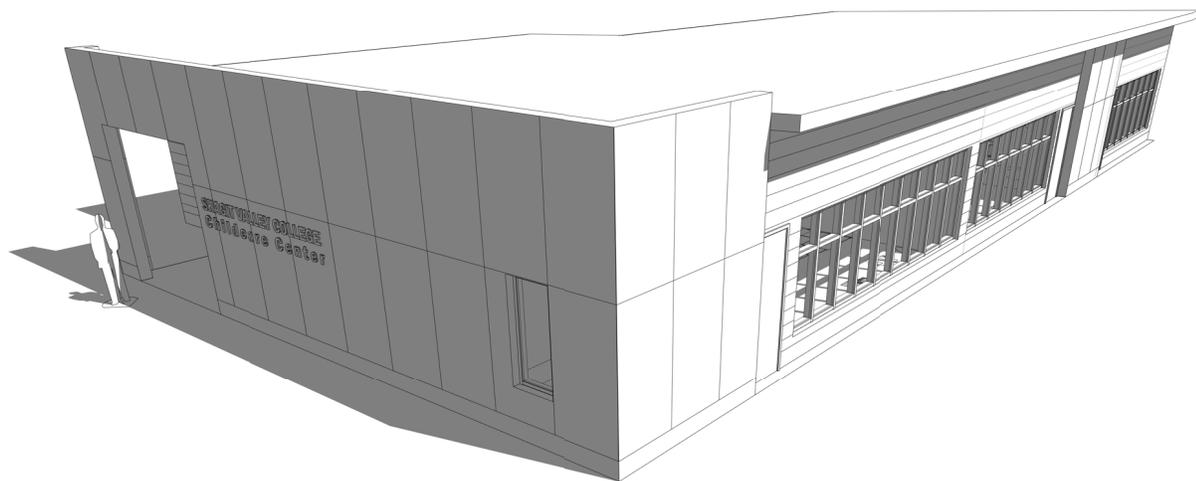
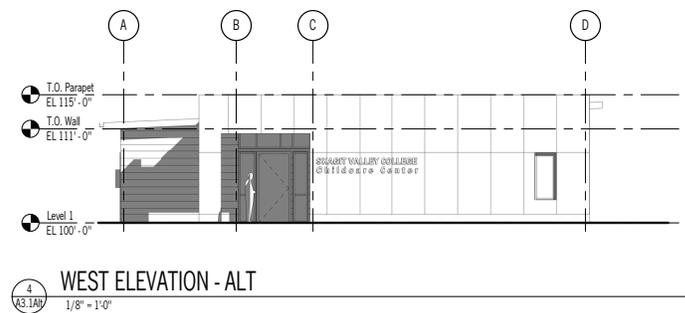
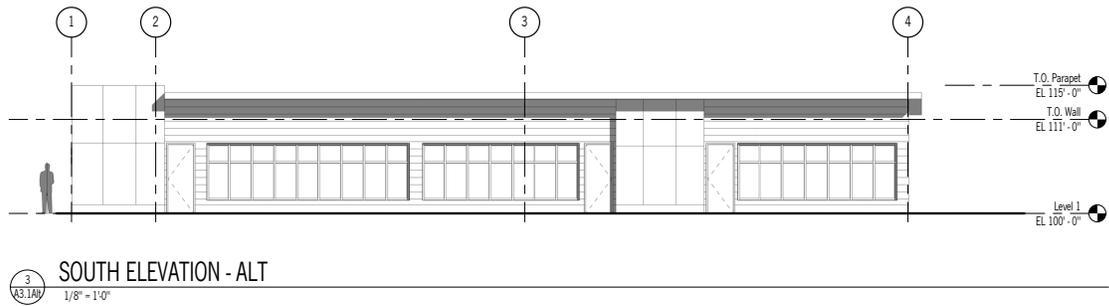


Figure 12. Estimate Set Excerpts
Childcare Center

7.3. Outline Specification

In conjunction with the Estimate Set of drawings, an outline specification was also developed for cost estimation. The outline specification includes the anticipated architectural specification sections required for the project manual, as well as a description of the scope of work to be included in each section. A copy of the outline specification can be found below. Product selections will be further refined in the design phases.

Number	Section Title	Description
010100	Summary of Work	Construction of a Childcare center building on the Mount Vernon campus of Skagit Valley College. This building will contain childcare classrooms and associated support space, office space for staff, a kitchen and staff area, and outdoor play areas.
	Alternates	<ol style="list-style-type: none"> 1. (Additive): Add radiant heating to the infant/toddler classroom 2. (Additive): Replace cementitious panel on West façade with brick veneer. 3. (Additive): Add an outdoor covered area at the children’s play area. 4. (Deductive): Reduce the Infant/Toddler classroom by 200 NSF. 5. (Deductive): reduce the Infant/Toddler classroom by 400 NSF.
017400	Construction Waste Management	A construction waste management program will be specified for demolition work and new construction to divert a minimum of 75% of waste to recycling.
033000	Cast-in-place Concrete	Cast in Place Concrete required to complete the project. Including: <ol style="list-style-type: none"> 1. Foundations: Conventional Strip footings with stem walls to frost depth. 2. Floor Slabs: 4” Slab-on-grade / vapor barrier / gravel capillary break.
042113	Brick Masonry	<p>Anchored Brick Veneer cladding system including brick masonry units, expansion joints, sealants, ties, relief angles.</p> <p>Provide Norman shape, 12” long x 3” high x 4” deep nominal dimensions. ½” mortar joints and sanded expansion joints. Sanded expansion joints color to match mortar color – (provide samples in submittal requirements). Provide L-shaped bricks at jambs and corners. Mutual Materials or equal, color: Imperial Red.</p>
055000	Metal Fabrications	All miscellaneous shop fabricated ferrous metal indicated or required to complete the work, including, but not limited to: mechanical & electrical equipment support frames, and fire sprinkler equipment support frames.
060573.13	Fire Retardant Treated Wood	Materials for use in rated construction.
060573.33	Preservative Treatment	Products to protect wood from moisture and decay: wood in contact with concrete and masonry, roofing membrane, window sills and wall base sills.
061000	Rough Carpentry	All work required for normal rough carpentry including but not limited to

		<p>structural and non-structural framing, connections, blocking, fire stopping, nailers, ground strips, plates, curbs, cants, plywood, fasteners, preservative treated wood, fire retardant treated lumber, building paper, and polyethylene building wrap.</p> <ol style="list-style-type: none"> 1. Typical exterior wall assembly: 2x6 wood frame walls with plywood sheathing. Double top plate all locations. Interior bearing wall along col line C. 2. Typical Roof Assembly: 12-14" TJI Roof joists with blocking as required. 2x outriggers to support roof overhangs. Plywood decking. 3. Glulam window headers
061643	Gypsum Sheathing	<p>Exterior gypsum soffit & wall sheathing over metal framing systems, self-adhesive air/vapor barrier membrane over joints.</p>
062000	Finish Carpentry & Millwork	<p>Normal finish carpentry and millwork items including but not limited to window sills, base trim, shelving and installation of certain work specified in other sections.</p>
064119	Custom Casework	<p>Custom casework, including:</p> <ol style="list-style-type: none"> 1. Wood veneer built-in cubbies (upper and lower) 2. Plam Upper and Lower cabinets in Kitchen and Meal Prep areas, with solid surface countertops. 3. Plam Upper and Lower cabinets in Diapering Areas with solid surface countertops. 4. Wood veneer sign-in counter at Office 5. Plam storage shelving in Boy's WC and Laundry/Storage rooms.
072113	Rigid Insulation	<p>Rigid insulation below slab on grade</p>
072116	Batt and Blanket Insulation	<p>Thermal glass wool blankets, sound-deadening acoustical batt insulation in walls and ceilings.</p>
072616	Underslab Vapor Barrier Sheeting	<p>Sheet membrane overlaying compacted drainage material (sand/gravel) and below sand bed under concrete slabs on grade.</p>
074293	Soffit Panels	<p>Painted exterior GWB soffits at all exposed to weather exterior soffits and underside of porch ceiling.</p>
074660	Fiber Cement Siding	<ol style="list-style-type: none"> 1. Horizontal Lap Siding: Thickness: 5/16 inch, 12 foot length, Smooth lap

		siding style, 12 inches wide.
		2. Fiber Cement Panels: Thickness: 5/16 inch, Smooth lap siding style, 4' x 6' sheets.
075400	Thermoplastic Membrane Roofing	<p>Furnish labor, material and equipment required for installation of fully adhered elastomeric sheet membrane roofing system (TMR). Provide fastenings and accessories for roof curbs, copings, penetrations, and the like, for weather tight installation per manufacturer's recommendations to meet a 20 year, 100 MPH 3-second gust warranty.</p> <p>Stevens Roofing Systems, Fully Adhered Stevens EP, or Carlisle Syntec is an approved manufacturer, or equal.</p>
076000	Sheet Metal Flashing and Trim	<p>Sheet metal work includes flashings, counterflashings, metal drips, heads and weaps, louver sill flashing, roof gutters, downspouts, condensation drip pans, reglets, scuppers, pipe penetrations, etc., and self-adhered flashing (SAF).</p> <p>Includes Stainless Steel flashings in all masonry construction, at all window and door sill-pan flashings; Aluminum flashings when adjacent to Aluminum CW & SF; and Galvanized where required by other work. Pre-coated galvanized steel, shop pre-coat with baked-on flouropolymer coatings (Kynar 500 resin) Prefinished, factory paint, "premium finish."</p>
078400	Firestopping	Provide firestopping materials for 1-hour ceiling, roof, and wall assemblies as required by Code.
079200	Joint Sealers	Materials employed to make water and air-tight seals between materials (joints); including all interior and exterior, vertical and horizontal surfaces, traffic and non-traffic area joints.
081200	Standard Steel Door Frames	Provide all labor, material, and equipment required for the installation of standard steel (hollow metal) door frames.
081400	Wood Doors	All interior doors scheduled as wood, 5-ply "premium grade" transparent finished doors, 1 3/4" solid core rated and non-rated, to be factory finished.
084000	Entrances and Storefronts	Aluminum thermal glazed fixed storefront and window system with heavy-duty entrance doors to match Kawneer 1600 curtain wall system. Includes stainless

087100	Finish Hardware	<p>steel & self-adhered flashing sub-sill pan flashings, and aluminum sills to match aluminum windows.</p> <p>Complete finish hardware for doors and frames, including exit devices, closers, automatic door operators at entrances, panic devices, aluminum thresholds and ramps.</p> <ol style="list-style-type: none"> 1. Include door guards at hinge side in childrens areas. 2. Provide acoustical seal on doors to corridor from children’s classrooms.
088000	Glazing	<p>Exterior openings thermal glazed assemblies, interior glazing single sheet.</p> <p>Insulating Vision Unit: 1” insulating exterior glass units, with ½” airspace and two ¼-inch lites; interior lite clear & ¼” exterior lite is PPG SolarBan 70 Low E (#2) Starphire.</p>
088300	Mirrored Glass	<p>Custom wall-mounted mirrors in restrooms.</p>
089100	Louvers	<p>Metal Wall Louvers necessary to serve mechanical equipment.</p>
092226	Ceiling Suspension System for Gypsum Wallboard	<p>Pre-engineered drywall suspension system to support screw attached gypsum panels and independently supported light fixtures, air diffusers, etc.</p>
092900	Gypsum Board	<p>Gypsum wallboard installation over metal framing on interior walls and ceilings. System includes both fire rated and non-rated conditions. Water resistant gypsum board behind ceramic tile walls in restrooms.</p>
093100	Ceramic/ Porcelain Tile	<p>Ceramic tile floor base in toilet rooms and wall tile on plumbing walls. Latex-Portland cement mortar, Thinset installation.</p>
096513	Resilient Base	<p>Rubber wall base in all areas except in restrooms.</p>
096543	Linoleum Flooring	<p>Natural Linoleum Flooring in 30% of Childcare Classroom area, Kitchen, Laundry/storage, Childcare Support Areas, and Corridor.</p>
096800	Carpeting	<p>Tile Carpeting in Office and 70% of Childcare Classroom area.</p>

097200	Wall Coverings	FRP paneling on all Laundry room walls and on non-tile restroom walls.
099100	Painting	Paint all walls, hollow metal doors, and gypsum board ceilings.
101400	Identifying Devices/Signage	<p>Sign work includes:</p> <ol style="list-style-type: none"> 1. Interior signs and exterior signs that comply with requirements of The Americans with Disabilities Act (ADA). 2. (1) exterior wall mounted sign, water jet or laser cut stainless steel. Sign to read "SKAGIT VALLEY COLLEGE Childcare Center".
102813.13	Toilet and bath accessories	Stainless steel recessed mounted toilet and bath accessories per drawings.
104400	Fire Extinguisher Cabinets and Extinguishers	Provide fire extinguisher cabinets and portable fire extinguishers.
107113	Exterior Sun Control Devices	Provide custom profile Aluminum sunshades on building exterior where indicated.
113100	Residential Appliances	<p>Provide allowances for:</p> <ol style="list-style-type: none"> 1. Two Stackable Washing Machines 2. Two Stackable Dryers 3. One Refrigerator 4. One Under-counter dishwasher 5. One Electric range and oven 6. One Microwave
124813	Entrance Mats	Roll-up aluminum recessed floor mats at entrances as indicated, including foot grid with carpet finish that permits dirt to fall through slots between rail openings.

8.0 Project Budget

To evaluate the overall project cost, a project budget was developed in collaboration with SVC staff and the state project manager. This Project budget anticipates all of the expected hard and soft costs associated with developing the project, and was used to calculate the MACC target to balance the budget. The Project budget includes a design contingency of 12%, a construction contingency of 10%, and escalation contingency of 3% per year. Also included are projected Additional Service fees, taxes, an FF&E allowance of \$50,000, and other associated project management tasks. The total project cost is anticipated to be \$1,975,000. A copy of the project budget can be found on the following pages.

ENGINEERING & ARCHITECTURAL SERVICES
PROJECT BUDGET
 Budget Worksheet (using OFM Mar 04 Fee Schedule for 2005-2007, and 1997 UBC) revised 12/2/05

AGENCY: **Skagit Valley College** Project Number: **2014-093**
 PROJECT: **Child Care Center** Date: **3/13/2014**
 FACILITY: **Main Campus**

 <-- indicates field modified by SAA

Summary			
Appropriation	\$2,000,000		
MACC	\$1,300,000		65% of Appropriation
Percent Remodel	0	%	
A/E Fee Schedule	B	A/E Fee	9.82% of MACC
Construction Contingency	10	%	9.82% used in calculation
Tax Rate	8.50	%	
Artwork	N		
PWR Date	10/8/2013		
estimated GSF	4408		\$295 estimated \$/GSF
Consultant Services	\$288,895	\	
Construction Total	\$1,568,916	\	
Equipment	\$54,250	>	\$1,975,561 tot. proj. estimate
Artwork	\$0	/	including
Other Costs	\$63,500	/	\$130,000 tot. proj. contingencies
Estimated Balance	\$24,439		
Consultant Services	phase	amount	completion
Basic Services			
	NTP		11/15/2013
	13% Schematic Design	\$16,595.80	1/15/2014
	20% Design Development	\$25,532.00	3/1/2014
	36% Construction Documents	\$45,957.60	6/1/2014
	2% Bid	\$2,553.20	7/1/2014
	27% Construction	\$34,468.20	7/1/2015
	2% Completion	\$2,553.20	9/1/2015
	Subtotal Basic Services	\$127,660.00	
	Fee on Change Orders	\$0.00	
	TOTAL BASIC SERVICES	\$127,660.00	
Additional Services/Reimbursables			
a. Scoping and Feasibility		\$60,000	(actual)
b. Additional Civil Engineering		\$40,000	(estimate)
c. Wetland Consultant		\$15,000	(estimate)
d. Childcare Consultant		\$0	(deleted)
e. Audio/AV		\$0	(deleted)
f. Security		\$0	(deleted)
g. Energy Life Cycle Cost Analysis (LCCA)		\$0	
h. Geotechnical Investigation		\$10,000	(estimate)
i. Graphics		\$0	
j. Hazardous Material Consultant		\$0	
k. Hospital/Laboratory Consultant		\$0	
l. HVAC Balancing		\$0	
m. Indoor Air Quality Consultant		\$0	
n. Interior Design Consultant		\$0	
o. Kitchen Consultant		\$0	
p. Landscape Consultant		\$0	
q. On-Site Representative (Clerk of the Works)		\$0	
r. Record Drawings		\$8,000	(estimate)
s. Site Survey		\$8,235	(actual)
t. Testing		\$0	
u. Thermal Scans		\$0	
v. VE/Const.Reviw Participation & Implementation		\$0	
	subtotal Additional Services	\$141,235	

Figure 13. Project Budget Worksheet

PROJECT BUDGET

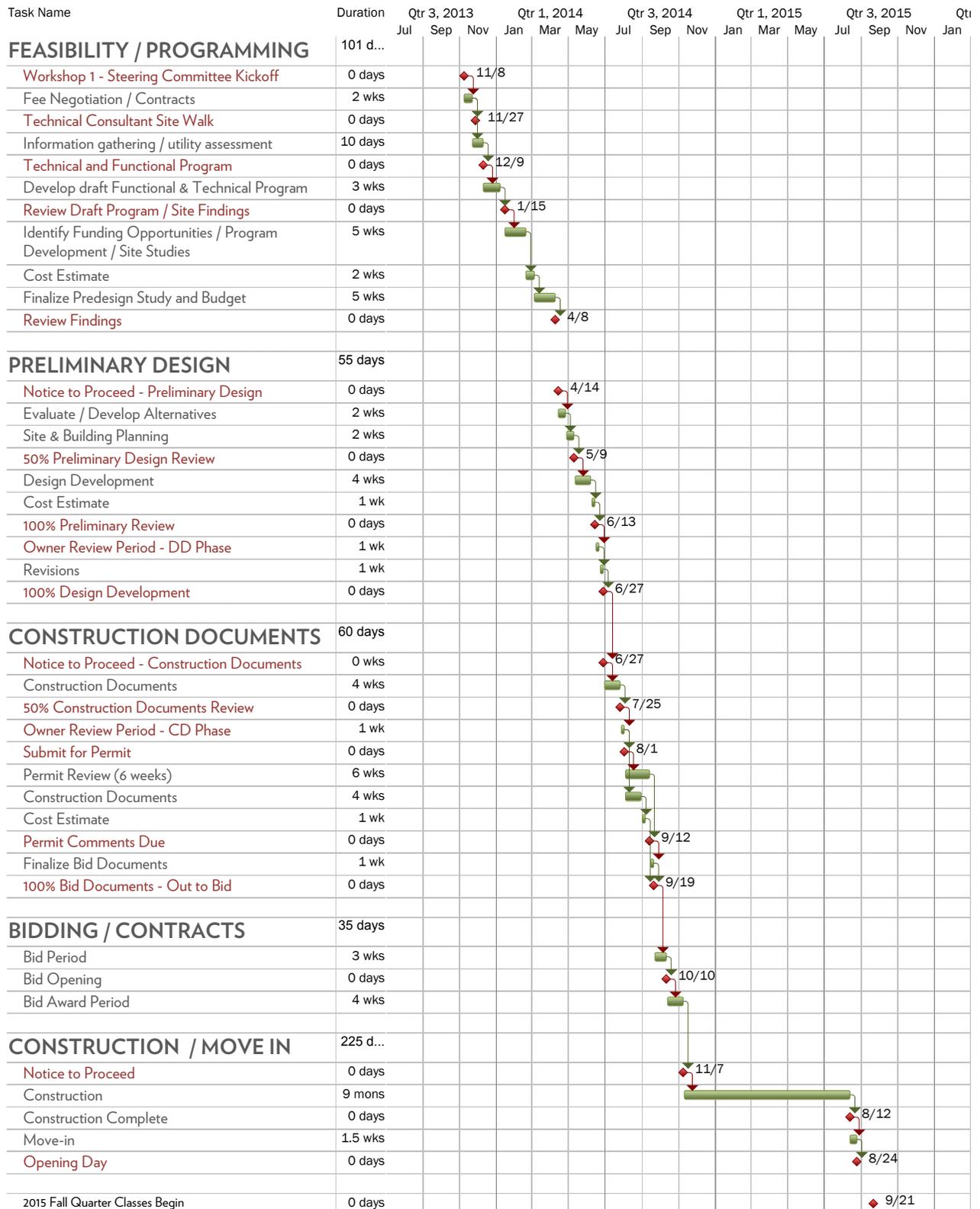
AGENCY: **Skagit Valley College**
 PROJECT: **Child Care Center**

Project Number: **2014-093**
 Date: **3/13/2014**

Direct Reimbursables a. Travel and PerDiem (In-State)		\$0	
b. Renderings, Presentations & Models		\$0	
c. Document Reproduction/Distribution (agreement))		\$20,000	
Additional Services Contingency		\$0	
subtotal		\$20,000	
TOTAL CONSULTANT SERVICES			\$288,895.00
Construction Contracts			
Hard Costs		MACC =	
Building Cost w/o permit & pre markup		\$734,810	
General Conditions		\$58,785	
Bond & Insurance		\$25,395	
Builders Fees		\$32,760	
Estimating Contingency (12%)		\$102,210	
Building Cost Subtotal w/markup		\$953,959	
Site Work w/o permit & pre markup		\$265,055	(estimate)
General Conditions		\$21,204	
Bond & Insurance		\$9,160	
Builders Fees		\$11,817	
Estimating Contingency (12%)		\$36,868	
Site Cost Subtotal w/markup		\$344,105	
Add 3% Escalation (1 year to midpoint)		\$38,942	
Deductive Alt: delete add'l 200SF (infant/toddler)		(\$34,640)	
Subtotal Construction w/o permit		\$1,302,366	
Permit		\$15,000	(estimate)
Subtotal		\$1,317,366	
Construction Contingency		\$130,000	
Additional Contingency		\$0	
Sales Tax		\$121,550	
TOTAL CONSTRUCTION			\$1,568,916
Owner - Furnishings/Equipment			
Fixed Equipment		\$0	
Furnishings		\$50,000	
Special Construction			
Sales Tax		\$4,250	
TOTAL FURNISHINGS/EQUIPMENT			\$54,250
Artwork		(1/2 % of the basic services, macc and furnishings)	
			\$0
Other Costs			
1. Bid Advertising		\$500	(estimate)
2. Additiional Civil Engineering		\$0	
3. Commissioning		\$5,000	(estimate)
4. Constructability Review		\$0	
5. Consultant Selection		\$0	
6. Cost/Scheduling Consultant (Independent)		\$0	
7. Design/Code Plan Check		\$0	(deleted)
8. Energy LCCA Review (WSEO/E&AS)		\$0	
9. Other Agreements			
10. Testing		\$18,000	(estimate)
11. Project Management			
a. E&A Services <i>if Inter-agency Agreement req</i>		\$40,000	(estimate)
b. Owner (In-Plant Services)		\$0	
12. Quality Control Consultant		\$0	
13. Utilities/Temporary Facilities		\$0	
14. Value Engineering		\$0	
TOTAL OTHER COSTS			\$63,500
GRAND TOTAL			\$1,975,561

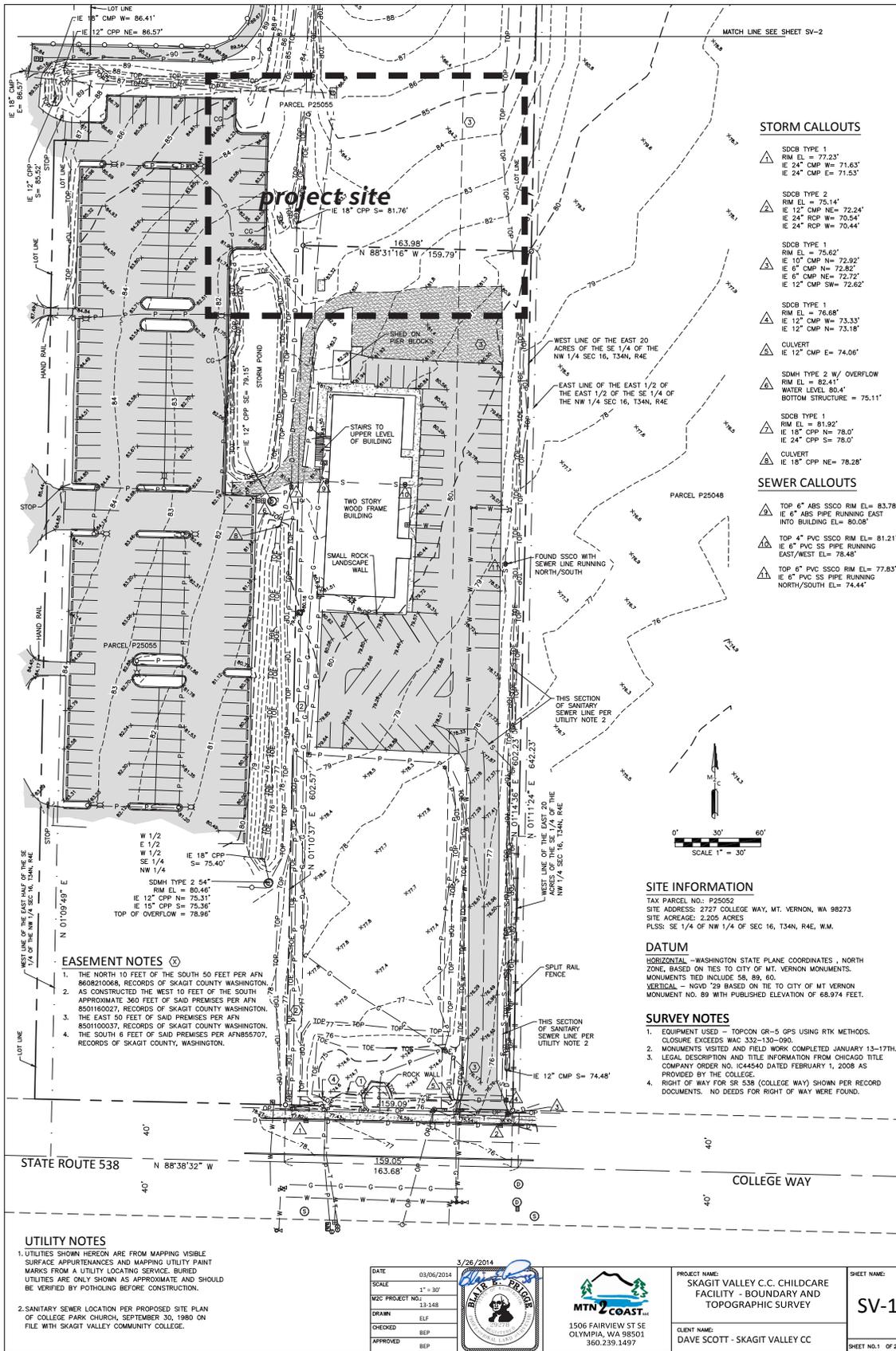
9.0 Project Schedule

The project schedule below was prepared in consultation with SVC staff and the state project manager assigned to the project. The projected completion date for the project is August 2015



10.0 Appendix

- 10.1. Site Survey
- 10.2. Detailed Cost Estimate
- 10.3. Estimate Set of Drawings
- 10.4. Code and Regulatory Review Notes
- 10.5. Structural Narrative
- 10.6. Civil Narrative
- 10.7. Mechanical Narrative
- 10.8. Electrical / Communications Narrative
- 10.9. Landscape Narrative
- 10.10. Wetland Delineation Report



STORM CALLOUTS

- SDCB TYPE 1
RIM EL = 77.23'
IE 24" CMP W = 71.63'
IE 24" CMP E = 71.53'
- SDCB TYPE 2
RIM EL = 76.14'
IE 12" CMP NE = 72.24'
IE 24" RCP W = 70.54'
IE 24" RCP W = 70.44'
- SDCB TYPE 1
RIM EL = 75.62'
IE 10" CMP N = 72.92'
IE 6" CMP N = 72.82'
IE 6" CMP NE = 72.72'
IE 12" CMP SW = 72.62'
- SDCB TYPE 1
RIM EL = 76.68'
IE 12" CMP W = 73.33'
IE 12" CMP N = 73.18'
- CULVERT
IE 12" CMP E = 74.08'
- SDMH TYPE 2 W/ OVERFLOW
RIM EL = 82.11'
WATER LEVEL 80.4'
BOTTOM STRUCTURE = 75.11'
- SDCB TYPE 1
RIM EL = 81.92'
IE 18" CPP N = 78.07'
IE 24" CPP S = 78.07'
- CULVERT
IE 18" CPP NE = 78.28'

SEWER CALLOUTS

- TOP 6" ABS SDCO RIM EL = 83.78'
IE 6" ABS PIPE RUNNING EAST INTO BUILDING EL = 80.08'
- TOP 4" PVC SDCO RIM EL = 81.21'
IE 6" PVC SS PIPE RUNNING EAST/WEST EL = 78.48'
- TOP 6" PVC SDCO RIM EL = 77.83'
IE 6" PVC SS PIPE RUNNING NORTH/SOUTH EL = 74.44'

EASEMENT NOTES

1. THE NORTH 10 FEET OF THE SOUTH 50 FEET PER AFN 8608210068, RECORDS OF SKAGIT COUNTY WASHINGTON.
2. AS CONSTRUCTED THE WEST 10 FEET OF THE SOUTH APPROXIMATE 300 FEET OF SAID PREMISES PER AFN 8501160027, RECORDS OF SKAGIT COUNTY WASHINGTON.
3. THE EAST 50 FEET OF SAID PREMISES PER AFN 8501100037, RECORDS OF SKAGIT COUNTY WASHINGTON.
4. THE SOUTH 8 FEET OF SAID PREMISES PER AFN 855707, RECORDS OF SKAGIT COUNTY, WASHINGTON.

UTILITY NOTES

1. UTILITIES SHOWN HEREON ARE FROM MAPPING VISIBLE SURFACE APPURTENANCES AND MAPPING UTILITY PAINT MARKS FROM A UTILITY LOCATING SERVICE. BURIED UTILITIES ARE ONLY SHOWN AS APPROXIMATE AND SHOULD BE VERIFIED BY POT-HOLING BEFORE CONSTRUCTION.
2. SANITARY SEWER LOCATION PER PROPOSED SITE PLAN OF COLLEGE PARK CHURCH, SEPTEMBER 30, 1980 ON FILE WITH SKAGIT VALLEY COMMUNITY COLLEGE.

SITE INFORMATION

TAX PARCEL NO.: P25052
 SITE ADDRESS: 2727 COLLEGE WAY, MT. VERNON, WA 98273
 SITE ACREAGE: 2.205 ACRES
 PLSS: SE 1/4 OF NW 1/4 OF SEC 16, T34N, R4E, W.M.

DATUM

HORIZONTAL - WASHINGTON STATE PLANE COORDINATES, NORTH ZONE, BASED ON TIES TO CITY OF MT. VERNON MONUMENTS. MONUMENTS TIED INCLUDE SR, 89, 60.
 VERTICAL - NGVD '29 BASED ON TIE TO CITY OF MT VERNON MONUMENT NO. 89 WITH PUBLISHED ELEVATION OF 68.974 FEET.

SURVEY NOTES

1. EQUIPMENT USED - TOPCON GR-5 GPS USING RTK METHODS. CLOSURE EXCEEDS WAC 332-130-090.
2. MONUMENTS VISITED AND FIELD WORK COMPLETED JANUARY 13-17TH.
3. LEGAL DESCRIPTION AND TITLE INFORMATION FROM CHICAGO TITLE COMPANY ORDER NO. 1044540 DATED FEBRUARY 1, 2008 AS PROVIDED BY THE COLLEGE.
4. RIGHT OF WAY FOR SR 538 (COLLEGE WAY) SHOWN PER RECORD DOCUMENTS. NO DEEDS FOR RIGHT OF WAY WERE FOUND.

DATE: 03/06/2014
 SCALE: 1" = 30'
 MDC PROJECT NO.: 13-148
 DRAWN: ELF
 CHECKED: BEP
 APPROVED: BEP

1506 FAIRVIEW ST SE
 OLYMPIA, WA 98501
 360.239.1497

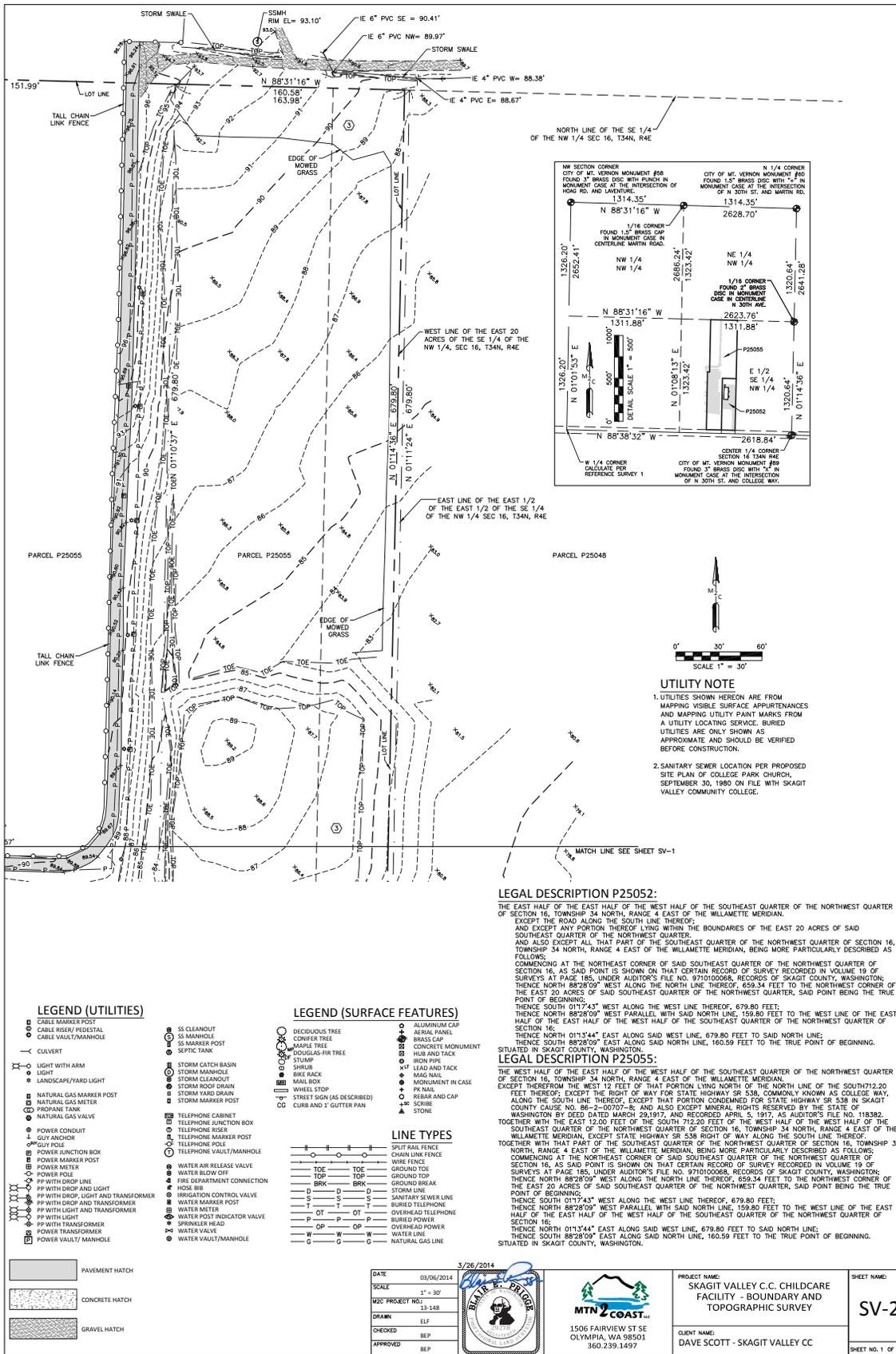
PROJECT NAME:
 SKAGIT VALLEY C.C. CHILDCARE FACILITY - BOUNDARY AND TOPOGRAPHIC SURVEY

CLIENT NAME:
 DAVE SCOTT - SKAGIT VALLEY CC

SHEET NAME:
SV-1

SHEET NO. 1 OF 2

Site Survey (south)



LEGEND (UTILITIES)

- CABLE MARKER POST
- CABLE RISER/PEDESTAL
- CABLE VAULT/MANHOLE
- CULVERT
- LIGHT WITH ARM
- LIGHT
- LANDSCAPE/YARD LIGHT
- NATURAL GAS MARKER POST
- NATURAL GAS METER
- PROPANE TANK
- NATURAL GAS VALVE
- POWER CONDUIT
- GUY POLE
- POWER JUNCTION BOX
- POWER MARKER POST
- POWER METER
- PP WITH DROP LINE
- PP WITH DROP AND LIGHT
- PP WITH DROP AND TRANSFORMER
- PP WITH DROP AND TRANSFORMER
- PP WITH LIGHT
- PP WITH TRANSFORMER
- POWER TRANSFORMER
- POWER VAULT/MANHOLE
- SS CLEANOUT
- SS MANHOLE
- SS MARKER POST
- SEPTIC TANK
- STORM CATCH BASIN
- STORM MANHOLE
- STORM CLEANOUT
- STORM ROOF DRAIN
- STORM YARD DRAIN
- STORM MARKER POST
- TELEPHONE CABINET
- TELEPHONE JUNCTION BOX
- TELEPHONE RISER
- TELEPHONE MARKER POST
- TELEPHONE POLE
- TELEPHONE VAULT/MANHOLE
- WATER AIR RELEASE VALVE
- WATER BLOW OFF
- FIRE DEPARTMENT CONNECTION
- HOSE BIB
- IRRIGATION CONTROL VALVE
- WATER MARKER POST
- WATER METER
- WATER POST INDICATOR VALVE
- SPRINKLER HEAD
- WATER VALVE
- WATER VAULT/MANHOLE

LEGEND (SURFACE FEATURES)

- DECIDUOUS TREE
- CONIFER TREE
- MAPLE TREE
- DOUGLAS-FIR TREE
- SHUB
- BIKE RACK
- MAIL BOX
- WHEEL STOP
- STREET SIGN (AS DESCRIBED)
- CURB AND GUTTER PAV.
- ALUMINUM CAP
- AERIAL PANEL
- BRASS CAP
- CONCRETE MONUMENT
- HUB AND TACK
- IRON PIPE
- LEAD AND TACK
- MAG NAIL
- MONUMENT IN CASE
- PK NAIL
- REBAR AND CAP
- SCRIB
- STONE

LINE TYPES

- SPLIT RAIL FENCE
- CHAIN LINK FENCE
- WIRE FENCE
- TOE
- TOP
- GROUND TOE
- GROUND TOP
- BRK
- D
- S
- S
- T
- T
- P
- OP
- W
- W
- G
- G

- ▨ PAVEMENT HATCH
- ▨ CONCRETE HATCH
- ▨ GRAVEL HATCH

DATE	03/06/2014
SCALE	1" = 30'
MFC PROJECT NO.	13-148
DRAWN	ELF
CHECKED	BEF
APPROVED	BEF



PROJECT NAME:	SKAGIT VALLEY C.C. CHILDCARE FACILITY - BOUNDARY AND TOPOGRAPHIC SURVEY	SHEET NAME:	SV-2
CLIENT NAME:	DAVE SCOTT - SKAGIT VALLEY CC	SHEET NO. 1 OF 2	

Site Survey (north)

PROJECT: Skagit Valley College Child Care Center
 Address: Mount Vernon, WA

Project delivery analysts, llc
 9001 Springwood Avenue NE, Bainbridge Island, WA 98110

Feasibility Phase Cost Summary

Page No.: SUMMARY SHEET
 Date: 13-Mar-14

4,408 SF 21,780 SF 0 SF 0 SF

Estimate By: WPJ
 4,408 SF

ITEM	DESCRIPTION	CHILD CARE CENTER		SITWORK		OFFSITE		NOT USED		LINE TOTALS	
		COST	\$ / SF	COST	\$ / SF	COST	\$ / SF	COST	\$ / SF	COST	\$ / SF
DIRECT HARD COSTS											
1.	Off-Site Improvements	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00
2.	Sitework: Demo/Earthwork/Utils.	\$ 0	\$ 0.00	\$ 169,167	\$ 7.77	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 169,167	\$ 38.38
3.	Hardscapes/Parking	\$ 0	\$ 0.00	\$ 51,179	\$ 2.35	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 51,179	\$ 11.61
4.	Site Specialties	\$ 0	\$ 0.00	\$ 20,000	\$ 0.92	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 20,000	\$ 4.54
5.	Landscape/Softscape	\$ 0	\$ 0.00	\$ 24,709	\$ 1.13	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 24,709	\$ 5.61
6.	Foundations	\$ 52,309	\$ 11.87	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 52,309	\$ 11.87
7.	Vertical Structure	\$ 9,603	\$ 2.18	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 9,603	\$ 2.18
8.	Floor and Roof Structure	\$ 46,094	\$ 10.46	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 46,094	\$ 10.46
9.	Exterior Cladding	\$ 108,598	\$ 24.64	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 108,598	\$ 24.64
10.	Roofing and Waterproofing	\$ 48,401	\$ 10.98	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 48,401	\$ 10.98
11.	Interior Doors and Partitions	\$ 55,636	\$ 12.62	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 55,636	\$ 12.62
12.	Interior Finishes	\$ 59,116	\$ 13.41	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 59,116	\$ 13.41
13.	Fixed Equipment and Casework	\$ 19,541	\$ 4.43	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 19,541	\$ 4.43
14.	Furnishings	\$ 3,068	\$ 0.70	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 3,068	\$ 0.70
15.	Vertical Transportation	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00
16.	Fire Protection	\$ 23,625	\$ 5.36	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 23,625	\$ 5.36
17.	Plumbing	\$ 58,384	\$ 13.25	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 58,384	\$ 13.25
18.	HVAC	\$ 117,782	\$ 26.72	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 117,782	\$ 26.72
19.	Electrical	\$ 132,655	\$ 30.09	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 132,655	\$ 30.09
DIRECT SUBTOTALS		\$ 734,810	\$ 166.70	\$ 265,055	\$ 12.17	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 999,865	\$ 226.83
INDIRECT HARD COSTS											
20.	Escalation - not included	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 0	\$ 0.00
21.	General Conditions @ 8%	\$ 58,785	\$ 13.34	\$ 21,204	\$ 0.97	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 79,989	\$ 18.15
22.	Bond and Insurance, B&O @ 3.2%	\$ 25,395	\$ 5.76	\$ 9,160	\$ 0.42	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 34,555	\$ 7.84
23.	Builder Fees @ 4%	\$ 32,760	\$ 7.43	\$ 11,817	\$ 0.54	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 44,576	\$ 10.11
24.	Estimating contingency @ 12%	\$ 102,210	\$ 23.19	\$ 36,868	\$ 1.69	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 139,078	\$ 31.55
INDIRECT SUBTOTALS		\$ 219,149	\$ 49.72	\$ 79,050	\$ 3.63	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 298,199	\$ 67.65
GRAND TOTALS		\$ 954,000	\$ 216.42	\$ 344,000	\$ 15.80	\$ 0	\$ 0.00	\$ 0	\$ 0.00	\$ 1,298,000	\$ 294.48
ALTERNATES:											
1.	Restore radiant heat to infant/toddler classroom 890 GSF	\$ 13,300	\$ 3.02							\$ -	\$ -
2.	Replace cement panel at west facade with brick veneer	\$ 16,900	\$ 3.83							\$ -	\$ -
3.	Increase classroom size by 10% each (250 GSF total area)	\$ 43,300	\$ 9.82							\$ -	\$ -
4.	Add 500 SF covered outdoor space / porch @ \$40 / SF	\$ 20,000	\$ 4.54							\$ -	\$ -
5.	Reduce classroom size by 200 sf (200 GSF total area)	\$ (34,640)	\$ (7.86)							\$ -	\$ -
6.	Delete infant care program space (400 GSF total area)	\$ (69,280)	\$ (15.72)							\$ -	\$ -
Subtotal of Upgrades and Alternates		\$ (10,420)	\$ (2.36)								
SOFT COSTS - BY OWNER											
25.	Primary Design Consultants	\$ -	\$ -							\$ -	\$ -
26.	Hazardous material report and handling	\$ -	\$ -							\$ -	\$ -
27.	Soils reports and borings	\$ -	\$ -							\$ -	\$ -
28.	A/V plus Graphic Production fees	\$ -	\$ -							\$ -	\$ -
29.	Reproducibles	\$ -	\$ -							\$ -	\$ -
30.	Testing and Inspections	\$ -	\$ -							\$ -	\$ -
31.	Furniture, equipment, artwork	\$ -	\$ -							\$ -	\$ -
32.	Permits and Fees	\$ -	\$ -							\$ -	\$ -
33.	Utility Company Charges	\$ -	\$ -							\$ -	\$ -
34.	Legal Services	\$ -	\$ -							\$ -	\$ -
35.	WA State Sales Tax	\$ -	\$ -							\$ -	\$ -
36.	Owner's Insurances	\$ -	\$ -							\$ -	\$ -
37.	CM Fee	\$ -	\$ -							\$ -	\$ -
38.	Other Admin. And O.H. Costs	\$ -	\$ -							\$ -	\$ -
39.	Marketing and Advertising	\$ -	\$ -							\$ -	\$ -
40.	Soft Cost Contingency	\$ -	\$ -							\$ -	\$ -
41.	Warranty Expense / Post Const.	\$ -	\$ -							\$ -	\$ -
SOFT COST TOTALS		\$ -	\$ -							\$ -	\$ -
GRAND TOTALS (Not Incl Alternates)		\$ 1,287,580	\$ 292.10								

*NOT INCLUDING FINANCING COSTS

Child Care Center Building

Detailed Cost Breakdown

AREAS:

Enclosed				
First floor.....	4,408 SF		Confirmed with S/A	
Mechanical mezzanine.....	0 SF		None found	
	Subtotal	4,408 SF		
Covered	0 SF	@ 50% value		Overhangs not counted
	Total	4,408 SF		

CONTROL QUANTITIES:

Number of Levels.....	1 EA		Ratio to
Gross Area.....	4,408 SF	1.000	Gross Area
Covered Area.....	0 SF	0.000	

No.	Component Description	Quantity	U/M	Unit Cost	Extension
1.	Foundations				
	Concrete slab on grade 4" thick.....	4,408 SF		\$ 4.50	\$ 19,836
	Slab reinforcing steel mesh.....	6,612 LB		\$ 0.60	\$ 3,967
	Underslab vapor barrier sheeting, incl 10% laps.....	4,849 SF		\$ 0.50	\$ 2,424
	Convention footings, allowance.....	4,408 SF		\$ 3.00	\$ 13,224
	Foundation stem walls, assume 8" wide x 1' avg ht.....	306 SF		\$ 15.00	\$ 4,590
	Reinforcing steel at 125#/CY.....	4 Tons		\$ 1,750.00	\$ 6,125
	Foundation rigid insulation R10.....	1,224 SF		\$ 1.75	\$ 2,142
	Foundation drain, see civil estimate.....	306 LF		\$ -	\$ -
		Subtotal:			\$ 52,309
2.	Vertical Structure				
	New wood posts - assume 15% of horizontal framing.....	15% PCT		\$ 35,112	\$ 5,267
	Interior plywood for shear transfer.....	1,650 SF		\$ 2.00	\$ 3,300
	Wood headers over windows, assume 6x8.....	74 LF		\$ 14.00	\$ 1,036
	Exterior load bearing walls and ext plywood, see below.....	0 SF		\$ -	\$ -
		Subtotal:			\$ 9,603
3.	Floor and Roof Structure				
	Roof framing, TJI joists and dimensional rafters.....	5,016 SF		\$ 7.00	\$ 35,112
	Roof sheathing, plywood.....	5,016 SF		\$ 1.75	\$ 8,778
	Sunshades - see exterior cladding below.....	0 SF		\$ -	\$ -
	Miscellaneous metals and connections.....	4,408 SF		\$ 0.50	\$ 2,204
		Subtotal:			\$ 46,094
4.	Exterior Cladding				
	Exterior doors, frames and hardware -				
	Service doors Hollow Metal.....	2 EA		\$ 1,100.00	\$ 2,200
	Entry and Classroom doors and frames, Glass.....	5 EA		\$ 1,500.00	\$ 7,500
	Auto door operators at entrances.....	2 EA		\$ 1,800.00	\$ 3,600
	Reduce classroom size by 200 sf (200 GSF total area)	2 EA		\$ 75.00	\$ 150
	Delete infant care program space (400 GSF total area)	2 EA		\$ 1,800.00	\$ 3,600
	Windows and glazing -				
	Storefront windows.....	428 SF		\$ 45.00	\$ 19,260
	Punched windows.....	70 SF		\$ 50.00	\$ 3,500
	Sunshades - deleted.....	0 SF		\$ 70.00	\$ -
	Hardie siding o/ sheathing o/ plywood o/ WS, batts, and int gwb.....	3,340 SF		\$ 17.25	\$ 57,606
	Hardie soffit o/ sheathing to roof framing at overhangs and porch.....	608 SF		\$ 7.50	\$ 4,560
	Hardie and sheathing at inside of roof parapet.....	162 SF		\$ 6.50	\$ 1,053

No.	Component Description	Quantity	U/M	Unit Cost	Extension
	Parapet cap.....	54	LF	\$ 9.00	\$ 486
	Metal wall louvers - not need with mechanical outside.....	0	SF	\$ 50.00	\$ -
	Add architectural screening and pads for outdoor mech units, TBD.....	1	LS	\$ 2,000.00	\$ 2,000
	Paint Hardie.....	4,110	SF	\$ 0.75	\$ 3,082
	Owner sign "SKAGIT VALLEY COLLEGE Child Care Center"	0	LETTER	\$ 100.00	\$ -
Subtotal:					\$ 108,598
5.	Roofing, Skylights and Waterproofing				
	Fully adhered thermoplastic membrane roof by Stevens.....	5,016	SF	\$ 7.00	\$ 35,112
	R-39 batt insulation below sheathing.....	4,408	SF	\$ 2.00	\$ 8,816
	Roof gutter.....	98	LF	\$ 12.00	\$ 1,176
	Downspouts.....	48	LF	\$ 9.00	\$ 432
	General sheet metal allowance.....	3.0%	PCT	\$ 36,720	\$ 1,102
	Caulking and sealants.....	4,408	GSF	\$ 0.40	\$ 1,763
Subtotal:					\$ 48,401
6.	Interior Partitions and Doors				
	Interior Partitions				
	Type A walls at north block - 2x4 WS, insulation, 5/8" gwb es.....	1,155	SF	\$ 8.00	\$ 9,240
	Type A walls at learning - 2x6 WS, insulation, 5/8" gwb es.....	2,088	SF	\$ 8.75	\$ 18,270
	Double stud walls at water closets - (2) 2x6 WS, insul, gwb es	240	SF	\$ 11.00	\$ 2,640
	Interior glazed wall at interior vestibule.....	108	SF	\$ 42.00	\$ 4,536
	Interior Doors				
	Hollow metal frame x wood or hm door, with hardware.....	12	EA	\$ 1,200.00	\$ 14,400
	Glass x aluminum door at interior vestibule wall.....	1	EA	\$ 1,500.00	\$ 1,500
	Premium for acoustical seals and closers at select doors.....	5	EA	\$ 500.00	\$ 2,500
	Interior Glazing				
	Glazed relites adjacent to CR doors.....	42	SF	\$ 25.00	\$ 1,050
	Interior glazing at check in counter.....	16	SF	\$ 50.00	\$ 800
	Acoustical, other special aspects				
	Access doors allow.....	2	EA	\$ 350.00	\$ 700
Subtotal:					\$ 55,636
7.	Interior Finishes - Floors, Walls, Ceilings				
	Flooring -				
	Ceramic tile floor at restrooms.....	244	SF	\$ 11.00	\$ 2,684
	Sealed concrete at MEP and service.....	144	SF	\$ 1.00	\$ 144
	Carpet or high quality resilient flooring elsewhere, TBD.....	4,020	SF	\$ 4.50	\$ 18,090
	Bases -				
	Rubber base, 3.5".....	950	LF	\$ 2.50	\$ 2,375
	Tile base.....	104	LF	\$ 11.50	\$ 1,196
	Walls -				
	Ceramic tile at plumbing walls of restrooms to +6'.....	204	SF	\$ 9.50	\$ 1,938
	Paint inside face of exterior wall.....	3,340	SF	\$ 0.60	\$ 2,004
	Paint interior walls, both faces.....	5,405	GSF	\$ 0.75	\$ 4,054
	Paint interior doors and frames.....	12	EA	\$ 65.00	\$ 780
	Marlite or other washable surface for sanitation.....	720	SF	\$ 4.00	\$ 2,880
	Ceilings -				
	ACT ceilings except as noted below.....	3,535	SF	\$ 4.50	\$ 15,908
	GWB ceilings at kitchen, toilets, laundry, meal prep, diapering	873	SF	\$ 6.00	\$ 5,238
	Paint gwb ceilings.....	873	SF	\$ 0.90	\$ 786
	Misc painting scope				
	Touch up and punch list.....	16	MH	\$ 65.00	\$ 1,040
Subtotal:					\$ 59,116

No.	Component Description	Quantity	U/M	Unit Cost	Extension
8.	Fixed Equipment, Casework and Specialties				
	Casework				
	Wood veneer check in counter.....	4 LF		\$ 90.00	\$ 360
	P lam lower cabinets as per plan.....	40 LF		\$ 180.00	\$ 7,200
	P lam upper cabinets.....	40 LF		\$ 115.00	\$ 4,600
	Counter tops over lower units listed above, Basix or equal	80 SF		\$ 25.00	\$ 2,000
	Savings to procure via CI program.....	-40% PCT		\$ 14,160.00	\$ (5,664)
	Wood window sill.....	58 LF		\$ 10.00	\$ 580
	Bathroom accessories.....	4 Room		\$ 625.00	\$ 2,500
	Restroom mirrors.....	32 SF		\$ 22.00	\$ 704
	Code signage.....	4,408 GSF		\$ 0.15	\$ 661
	Kitchen and Laundry equipment				
	Refrigerator.....	1 EA		\$ 900.00	\$ 900
	Range / cooktop.....	1 EA		\$ 500.00	\$ 500
	Automatic dishwasher.....	1 EA		\$ 700.00	\$ 700
	Microwave.....	2 EA		\$ 200.00	\$ 400
	Washing machine.....	2 EA		\$ 600.00	\$ 1,200
	Dryer.....	2 EA		\$ 450.00	\$ 900
	Set in place and hook up of above.....	9 EA		\$ 200.00	\$ 1,800
	Fire extinguisher cabinets - allowance.....	1 EA		\$ 200.00	\$ 200
	Subtotal:				\$ 19,541
9.	Furnishings				
	Entry mats - roll up aluminum recessed mats.....	48 SF		\$ 25.00	\$ 1,200
	Horizontal mini blinds, no dangling pull cords.....	498 SF		\$ 3.75	\$ 1,868
	Subtotal:				\$ 3,068
10.	Vertical Transportation - none found				
	Subtotal:				\$ 0
11.	Fire Protection - see Hargis estimate dated 3/12/2014				
	Design / Build wet pipe system				
	Sprinkler service entrance - PIV, FDC - see site estimate	0 EA		\$ 3,800.00	\$ -
	Enclosed area, wet pipe, light hazard.....	4,408 SF		\$ 4.00	\$ 17,632
	Backflow preventer.....	1 LS		\$ 5,993.00	\$ 5,993
	MC OH+P - not needed if FP is hired by GC.....	0% PCT		\$ 23,625.00	\$ -
	Subtotal:				\$ 23,625
12.	Plumbing - see Hargis estimate dated 3/12/2014				
	Sanitary fixtures and connection piping				
	Water closets.....	7 EA		\$ 2,290.00	\$ 16,030
	Lavatories.....	5 EA		\$ 1,775.00	\$ 8,875
	Sinks.....	2 EA		\$ 1,885.00	\$ 3,770
	Mop sinks.....	1 EA		\$ 1,300.00	\$ 1,300
	Plumbing equipment				
	Water heaters 80 gal.....	1 EA		\$ 8,250.00	\$ 8,250
	Expansion tank 8 gal.....	1 EA		\$ 1,338.00	\$ 1,338
	Expansion tank 34 gal.....	0 EA		\$ 1,942.00	\$ -
	Sanitary waste, vent and storm drain piping.....	4,408 SF		\$ 0.91	\$ 4,019
	Domestic water system.....	4,408 SF		\$ 1.54	\$ 6,794
	Plumbing pumps.....	1 FU		\$ 393.00	\$ 393
	MC OH+P.....	15% PCT		\$ 50,769.00	\$ 7,615
	Subtotal:				\$ 58,384
13.	Heating, Ventilating and Air Conditioning - see Hargis				

No.	Component Description	Quantity	U/M	Unit Cost	Extension
	General Provisions.....	4,408	SF	\$ 3.00	\$ 13,224
	Project close out and system start up.....	4,408	SF	\$ 0.50	\$ 2,204
	Basic materials and methods.....	4,408	SF	\$ 3.00	\$ 13,224
	Mechanical insulation.....	4,408	SF	\$ 1.56	\$ 6,876
	Natural gas piping - not needed.....	0	SF	\$ 0.00	\$ 0
	Hydronic piping systems - not needed.....	0	SF	\$ 0.00	\$ 0
	Refrigerant piping.....	3	EA	\$ 2,301.67	\$ 6,905
	Water treatment systems - not found.....	0	LS	\$ 750.00	\$ 0
	DDC controls.....	4,408	SF	\$ 6.00	\$ 26,448
	Air distribution.....	600	LBS	\$ 5.89	\$ 3,536
	Air distribution accessories.....	4,408	SF	\$ 0.75	\$ 3,306
	Air distribution equipment.....	4,408	SF	\$ 0.20	\$ 866
	Air devices.....	4,408	SF	\$ 0.45	\$ 1,976
	Heat transfer.....	0	LS	\$ 1,350.00	\$ 0
	Packaged HVAC VRF system.....	3	EA	\$ 4,620.00	\$ 13,860
	Radiant floor heating system.....	0	SF	\$ 7.00	\$ 0
	Commissioning support.....	4,408	SF	\$ 0.70	\$ 3,086
	Systems training.....	1	LS	\$ 2,000.00	\$ 2,000
	System O+M manuals.....	1	LS	\$ 500.00	\$ 500
	Test, adjust and balance.....	4,408	SF	\$ 1.00	\$ 4,408
	MC OH+P.....	15%	PCT	\$ 102,419	\$ 15,363
	Commissioning - by Owner agent.....	0%	PCT	\$ -	\$ 0
Subtotal:					\$ 117,782

14. Electrical - see Hargis estimate dated 3/13/2014

	Start up, mobilization, commissioning and testing.....	1	LS	\$ 8,920.00	\$ 8,920
	Electrical systems, panels, circuits, switches, grounding, dimmers	1	LS	\$ 32,717.00	\$ 32,717
	Comm services (TV, phone, fiber) see site electrical.....	0	LF	\$ 9.00	\$ -
	Emergency power - not included.....	0	LS	\$ -	\$ -
	Lighting -				
	Enclosed area.....	4,408	SF	\$ 8.00	\$ 35,264
	Exterior lighting - see site electrical.....	0	LS	\$ 9,500.00	\$ -
	Lighting control system, motion sensors - see systems above	4,408	SF	\$ -	\$ -
	Fire alarm system.....	4,408	SF	\$ 2.53	\$ 11,170
	Telephone / data.....	4,408	SF	\$ 2.46	\$ 10,841
	Security system.....	4,408	SF	\$ 3.73	\$ 16,440
	Alarm contacts at exits per Child Care code - see security above.....	8	EA	\$ -	\$ -
	EC OH+P.....	15%	PCT	\$ 115,352.00	\$ 17,303
Subtotal:					\$ 132,655

SITWORK - SEE SEPARATE ESTIMATES

15. Demo / Earthwork / Utilities

Subtotal:	\$ -
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16. Hardscape / Paving / Fencing

Subtotal:	\$ -
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17. Site Specialties

Subtotal:	\$ 0
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18. Landscaping and Irrigation

Subtotal:	\$ -
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Total Direct Costs	\$ 734,810
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check: \$ 0

On-Sitework

Detailed Cost Breakdown

AREAS:

Site area total:	21,780 GSF	Based upon 0.5 Acre
Paved area	7,500 SF	ACP and sidewalks
Building Pad	4,408 SF	See building estimate
Landscaped area	<u>7,770 SF</u>	
Remainder / misc	2,102 SF	

No.	Component Description	Quantity	U/M	Unit Cost	Extension
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SITWORK:

15. Demo / Earthwork / Utilities - see CPL estimate dated 3/3/2014

Site demo.....	0.5 ACRE	\$	3,614.00	\$	1,807
Site prep and erosion control.....	0.5 ACRE	\$	33,620.00	\$	16,810
Excavation and Earthwork.....					
Site mobilization.....	0.5 ACRE	\$	1,000.00	\$	500
Stripping and stockpile on site, not haul away.....	300 CY	\$	4.00	\$	1,200
Excavation, import assumed.....	111 CY	\$	25.00	\$	2,775
Rough grade at landscape areas.....	3,300 SF	\$	0.25	\$	825
Blade and fine grade at building and paving areas.....	13,000 SF	\$	0.35	\$	4,550
Storm Drains / Structures On Site.....	21,780 SF	\$	1.91	\$	41,520
Footing drains - 4" perforated - included above.....	0 LF	\$	25.00	\$	0
Sanitary sewer, manhole and cleanouts.....	1 LS	\$	14,125.00	\$	14,125
Fire and Water Service.....	1 LS	\$	32,845.00	\$	32,845
Gas service to off site POC - See Alternate.....	0 LS	\$	4,800.00	\$	0
Electrical - see Hargis estimate dated 3/3/2014					
Primary feeder conduit.....	300 LF	\$	11.50	\$	3,450
Transformer pad / pull vault.....	2 EA	\$	3,400.00	\$	6,800
225A service panel.....	60 LF	\$	55.00	\$	3,300
Telecom / fiber copper.....	1,400 LF	\$	9.00	\$	12,600
Telecom service conduit.....	60 FT	\$	10.00	\$	600
Trenching and backfill.....	350 LF	\$	9.00	\$	3,150
Site lighting.....	1 LS	\$	9,500.00	\$	9,500
Electrical utility charges, confirm.....	1 EA	\$	6,000.00	\$	6,000
EC OH+P.....	15% PCT	\$	45,400.00	\$	6,810
			Subtotal:	\$	169,167

16. Hardscape / Paving / Fencing - see CPL estimate

AC pavement over rock base 3" HMA / 4" CSBC.....	700 SY	\$	25.00	\$	17,500
Pavement markings.....	1 LS	\$	1,500.00	\$	1,500
Thickened edge AC.....	70 LF	\$	4.70	\$	329
Concrete curb and gutter.....	280 LF	\$	15.00	\$	4,200
Concrete sidewalk.....	1,200 SF	\$	5.00	\$	6,000
Curbed access ramps.....	2 EA	\$	250.00	\$	500
Concrete trike track - see Cascade estimate typ.....	80 LF	\$	50.00	\$	4,000
Concrete paving - campus walks, patios, plaza.....	500 SF	\$	5.50	\$	2,750
Chain link fence 6' high.....	250 LF	\$	24.00	\$	6,000
4' wide x 6' high chain link gate.....	2 EA	\$	200.00	\$	400
12' wide x 6' high chain link gate, simple.....	1 EA	\$	8,000.00	\$	8,000
			Subtotal:	\$	51,179

17. Site Specialties - see Cascade Design estimate

Bike racks - assume Grant funded.....	0 EA	\$	250.00	\$	0
---------------------------------------	------	----	--------	----	---

No.	Component Description	Quantity	U/M	Unit Cost	Extension
	Trash / recycling containers - assume Grant funded.....	0	EA	\$ 1,000.00	\$ 0
	Benches - Grant Funded.....	0	EA	\$ 1,500.00	\$ 0
	Climber and safety surfacing and surround.....	1	EA	\$ 15,000.00	\$ 15,000
	Sand box.....	1	EA	\$ 5,000.00	\$ 5,000
	Planters - Grant Funded.....	0	EA	\$ 1,500.00	\$ 0
Subtotal:					\$ 20,000

18. Landscaping and Irrigation - see Cascade Design estimate

	Irrigation tree bubblers.....	21	EA	\$ 50.00	\$ 1,050
	Shrub and raingarden irrigation.....	1,600	SF	\$ 1.00	\$ 1,600
	Planting soil.....	144	CY	\$ 45.00	\$ 6,480
	Compost 2.5" planting and lawn for amended subgrade.....	60	CY	\$ 44.97	\$ 2,698
	Protect stripping stockpile, screen and place as topsoil.....	60	CY	\$ 5.00	\$ 300
	Raingarden soil.....	44	CY	\$ 45.00	\$ 1,980
	Organic mulch 3" at planting beds.....	12	CY	\$ 40.00	\$ 493
	Grass lawn hydroseeding.....	1,170	SF	\$ 0.25	\$ 293
	Erosion repair seeding, swale seeding.....	5,000	SF	\$ 0.10	\$ 500
	1" cal deciduous trees.....	10	EA	\$ 100.00	\$ 1,000
	5 gal evergreen trees.....	7	EA	\$ 45.00	\$ 315
	Shrubs and groundcover.....	800	SF	\$ 5.00	\$ 4,000
	Raingarden plants.....	800	SF	\$ 5.00	\$ 4,000
Subtotal:					\$ 24,709

Total Sitework	\$ 265,055
-----------------------	-------------------

check: \$ 0

DESIGN / ESTIMATE REVIEW NOTES

Project: Skagit Valley College Child Care Center

Date: 3/13/14

Sort codes: 1=standard qualifications; 2=specific qualifications; 3=assumptions; 4=exclusions; 5=inclusions; 6=value engineering; 7=constructability / buildability; 8=added from prior estimate; 9=questions

Sort code	#	Building	Date	Item
1	1			Payment and performance bond premiums are included.
1	2			Handling & disposal of hazardous materials (asbestos, PCBs, lead, contaminated soil etc.) is not in the estimate.
1	3			The direct construction costs are done in today's dollars for Skagit County. An escalation factor was not applied.
1	4			A construction duration of nine months was assumed.
1	5		11-Mar	Estimate based on Estimator Preview Set dated 27 Feb 2014 and Outline Specification of the same date, as prepared by Schacht Aslani. The current update is prepared from the post-VE x.x Alt plans received 3-11-2014.
1	5.1		6-Mar	The estimate update reflects corrections and adjustments as discussed in the post draft review meeting at SAA offices on 3-5-2014.
2	6	Schedule		Our general conditions are based upon a 9 month construction schedule. The duration does not directly affect the estimate but rather is used to backcheck the general conditions amount on the summary page.
3	7			Design / estimating contingency is included at 12% for feasibility phase estimating but with an outline spec and good amount of information at this level.
3	8			Commissioning is to be done by an independent owner agent and is not in the construction contract. The estimate includes time for the mechanical contractor to participate in the commissioning effort.
3	9			Civil estimate prices check out. Some unit prices seemed a bit low and some seemed a bit high, but overall it balanced out. Given the early level of design and information, it was a good effort.
4	10			The estimate does not include utility company charges except for electrical. Confirm with Hargis this is by the Contractor.
4	11			The estimate does not include telephone equipment, telephones, routers, switches, computers, network cards or network software.
4	12			Emergency power and lighting is not included.
4	13			Framing materials are based upon non FSC certified.
5	14			Window blinds or shades included as an allowance. No dangling pull cords.
5	15			Exterior building sign is included at west elevation. Assumed cast aluminum letters anchored into masonry veneer.
5	16			Water treatment systems at \$750 / LS did not calculate into Hargis's Excel total. It is part of the attached master estimate.
6	17		6-Mar	Electrical at \$30 / SF is over the design-to range of \$20-\$25 proposed based on previous work. Suggest looking at lighting at \$9.30 per SF (instead of \$8.00 suggested earlier) and costs of fire alarm panel and security panels. The panels are expensive for a building of this size. Update includes lighting at \$8.00 per SF and reduction in FA and security panel costs per VE list.

PDA

Copy of SVC Child Care feasibility estimate 3 13 2014 revised 3/13/2014 3:19 PM

DESIGN / ESTIMATE REVIEW NOTES

Project: *Skagit Valley College Child Care Center*

Date: *3/13/14*

Sort codes: 1=standard qualifications; 2=specific qualifications; 3=assumptions; 4=exclusions; 5=inclusions;
6=value engineering; 7=constructability / buildability; 8=added from prior estimate; 9=questions

6	18		6-Mar	Fire sprinkler budget was changed to \$4.00 per SF. By contracting directly with the GC, the mechanical contractor OH+P was removed.
7	19		11-Mar	Under the Alt plans, the mechanical enclosure is outside the building footprint. So the pad there should be by civil. Confirm he is aware.
6	20			HVAC at \$43 / SF is over the design-to range of \$30-\$35 per SF. A portion of the delta is due to the radiant floor system, which was not part of the prototypical model.
6	21		6-Mar	Auto temp controls reduced to \$6 per SF.
6	22		13-Mar	Landscape price updated today based upon revised estimate from Cascade. Planting soil and compost quantities down, site items shifted to Grant funded, significant savings from the initial sub estimate.
				End of Section

PDA

Copy of SVC Child Care feasibility estimate 3 13 2014 revised 3/13/2014 3:19 PM

Radiant Slab

Detailed Cost Breakdown

AREAS:

Infant and Toddler area

890 SF

0 SF

Total

890 SF

Radiant Slab		Component Description	Quantity	U/M	Unit Cost	Extension
1.	Foundations					
Subtotal:						\$ -
2.	Vertical Structure					
Subtotal:						\$ -
3.	Floor and Roof Structure					
Subtotal:						\$ -
4.	Exterior Cladding					
Subtotal:						\$ -
5.	Roofing and Waterproofing					
Subtotal:						\$ -
6.	Interior Partitions and Doors					
Subtotal:						\$ -
7.	Interior Finishes - Floors, Walls, Ceilings					
Subtotal:						\$ -
8.	Fixed Equipment, Casework and Specialties					
Subtotal:						\$ -
9.	Special Construction					
Subtotal:						\$ -
10.	Vertical Transportation					
Subtotal:						\$ -
11.	Fire Protection					
Subtotal:						\$ -
12.	Plumbing					
Subtotal:						\$ -
13.	Heating, Ventilating and Air Conditioning					
	Electrical radiant slab incl equipment, boiler.....		890 SF		\$ 10.00	\$ 8,900
	MC OH+P.....		15% PCT		\$ 8,900.00	\$ 1,335
Subtotal:						\$ 10,235
14.	Electrical - see Travis Fitzmaurice estimate					
Subtotal:						\$ -
SITWORK:						
15.	Demo / Earthwork / Utilities					
Subtotal:						\$ -
16.	Hardscape / Paving / Fencing					
Subtotal:						\$ -
17.	Site Specialties					
Subtotal:						\$ -

Radiant Slab	Component Description	Quantity	U/M	Unit Cost	Extension
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18. Landscaping and Irrigation

Subtotal:	\$ -
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Total Direct Costs	\$ 10,235
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19. Indirect Costs

Escalation to midpoint.....	0.0%	PCT	\$ 10,235	\$ -
General Conditions.....	8.0%	PCT	\$ 10,235	\$ 819
Bond and Insurance, B&O.....	3.2%	PCT	\$ 11,054	\$ 354
General Contractor Fee.....	4.0%	PCT	\$ 11,408	\$ 456
Contingency at Concept Level.....	12.0%	PCT	\$ 11,864	\$ 1,424
Subtotal:				\$ 3,052

Total Direct and Indirect Costs	\$ 13,300
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Delete Brick, Add Hardie

Detailed Cost Breakdown

AREAS:

West Wall Area

575 SF

0 SF

Total

575 SF

Delete Brick, Add Hardie	Component Description	Quantity	U/M	Unit Cost	Extension
1. Foundations					
		Subtotal:			\$ -
2. Vertical Structure					
		Subtotal:			\$ -
3. Floor and Roof Structure					
		Subtotal:			\$ -
4. Exterior Cladding					
	Masonry veneer o/ sheathing o/plywood o/ WS, batts, and int gwb.....	575 SF		\$ 32.75	\$ 18,831
	Masonry veneer at inside of roof parapet per 3D perspective.....	84 SF		\$ 21.00	\$ 1,764
	Stainless steel flashings and support angles at masonry.....	12% PCT		\$ 13,839	\$ 1,661
	Coping cap over masonry veneer walls.....	42 LF		\$ 35.00	\$ 1,470
	Hardie siding o/ sheathing o/ plywood o/ WS, batts, and int gwb.....	-575 SF		\$ 17.25	\$ (9,919)
	Hardie siding at inside of roof parapet.....	-84 SF		\$ 4.50	\$ (378)
	Coping cap over Hardie clad wall, assume sheet metal.....	-42 LF		\$ 9.00	\$ (378)
	Sealing of masonry / painting of Hardie - No Change.....	-659 SF		\$ -	\$ -
		Subtotal:			\$ 13,051
5. Roofing and Waterproofing					
		Subtotal:			\$ -
6. Interior Partitions and Doors					
		Subtotal:			\$ -
7. Interior Finishes - Floors, Walls, Ceilings					
		Subtotal:			\$ -
8. Fixed Equipment, Casework and Specialties					
		Subtotal:			\$ -
9. Special Construction					
		Subtotal:			\$ -
10. Vertical Transportation					
		Subtotal:			\$ -
11. Fire Protection					
		Subtotal:			\$ -
12. Plumbing					
		Subtotal:			\$ -
13. Heating, Ventilating and Air Conditioning					
		Subtotal:			\$ -
14. Electrical - see Travis Fitzmaurice estimate					
		Subtotal:			\$ -
SITWORK:					
15. Demo / Earthwork / Utilities					

Delete Brick, Add Hardie	Component Description	Quantity	U/M	Unit Cost	Extension
		Subtotal:			\$ -
16. Hardscape / Paving / Fencing		Subtotal:			\$ -
17. Site Specialties		Subtotal:			\$ -
18. Landscaping and Irrigation		Subtotal:			\$ -
				Total Direct Costs	\$ 13,051
19. Indirect Costs					
	Escalation to midpoint.....	0.0%	PCT	\$ 13,051	\$ -
	General Conditions.....	8.0%	PCT	\$ 13,051	\$ 1,044
	Bond and Insurance, B&O.....	3.2%	PCT	\$ 14,095	\$ 451
	General Contractor Fee.....	4.0%	PCT	\$ 14,546	\$ 582
	Contingency at Concept Level.....	12.0%	PCT	\$ 15,128	\$ 1,815
				Subtotal:	\$ 3,892
				Total Direct and Indirect Costs	\$ 16,900

schnoebeli|astiani
architects

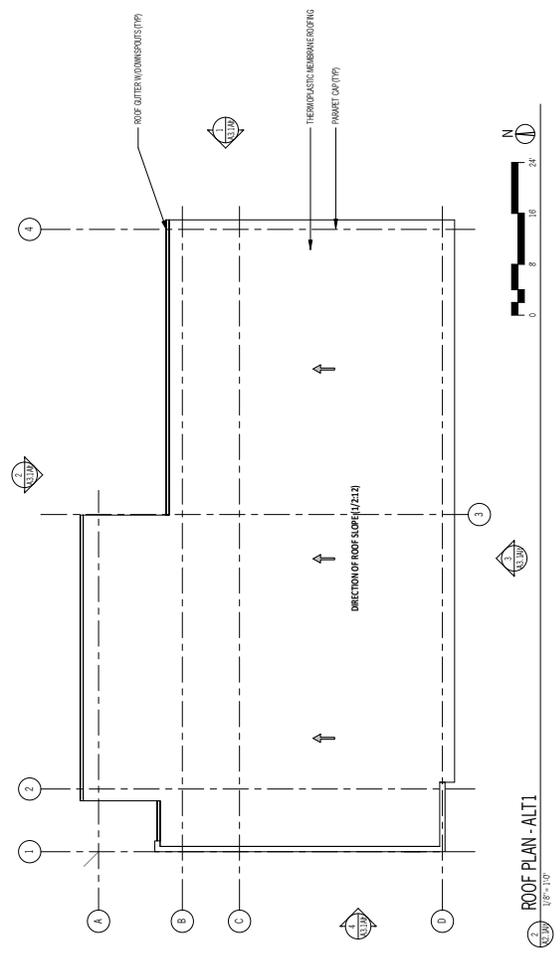
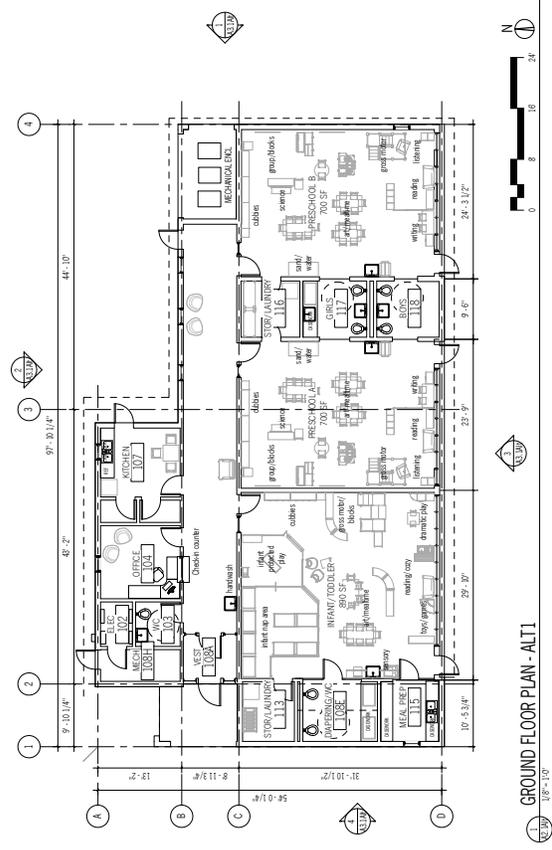
901 5th Avenue
Spokane, WA 99201
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2405 E College Way, Mt Vernon, WA, 98273
**Skagit Valley College
Childcare Center**

Principal: M. SMITH
Project Manager: ESTIMATOR
Drawn By: ESTIMATOR
Reviewed By: ESTIMATOR
Revision: 1
Date: 11 Mar 2014
Scale: 3/8"=1'-0"

WA Project No. pending
MF Permit No. pending
27 FEB 2014
**ESTIMATOR
PREVIEW SET**

Floor Plan -
Alternate
A2.1Alt



Code and Regulatory Requirements

ZONING & LAND USE CODE

Zoning for the site is governed by the City of Mount Vernon Municipal Code (MVMC). The Skagit Valley College campus is currently zoned P (Public District) per Chapter 17.30 (see zoning map on following page).

The P zone is intended to provide areas within the community that are available for public uses and to have master plans prepared for some of those uses. The college use is allowed outright by the P zone. Permitted accessory uses in the P district shall include those uses and activities customarily associated with and necessary to the operation of the permitted primary use. The childcare facility is therefore allowed within the zone as an accessory use per 17.30.030.

SETBACKS

Street & Yard Setbacks: Minimum street setbacks shall be as follows within the P zone:

- Front Yard: 10 feet, or 25 feet from an arterial street.
- Side & Rear yards: None, or 20 feet if property is adjacent to a residentially zoned district

LOT COVERAGE

No Maximum lot coverage

BUILDING HEIGHT

Maximum building height in the P zone is four stories, but not more than 50 feet per 17.30.080.

MASTER PLAN

All uses greater than 10 acres in size or larger require a master plan to be prepared. The master plan shall be processed as a type IV permit under Chapter 14.05 MVMC and shall meet the requirements outlined below. A site plan for each permitted and conditional use under 10 acres shall be prepared and reviewed as a type III permit under Chapter 14.05 MVMC for new construction or major addition(s) to an existing structure as determined by the development services director.

- A. Master Plan Submittal Requirements. The master plan shall include proposed land use information (land use, densities, site design, adjacent uses, circulation, utility corridors and alignments, wetlands) for review and approval by the city pursuant to the procedures of this chapter. The master plan shall also be accompanied by a phasing plan describing the general boundaries of each phase and the expected date at which a detailed site plan for that phase will be submitted. No project to be developed in phases may exceed 10 years from the time the master plan is approved until the final plan is submitted.
- B. The master plan shall be reviewed by the hearing examiner, recognizing the lesser level of detail included in the master plan application.
- C. Subsequent applications for approval shall be consistent with any approved master plan and shall contain all of the detailed information and materials deemed necessary by the development services director to adequately review the project.

LANDSCAPING

Landscaping shall be required pursuant to the terms in chapter 17.93 MVMC.

- B. Required Area. In P zoned districts 10 percent of the parking area shall be landscaped. Such amounts of landscaping may be included in the overall amount of landscaping required in MVMC [17.93.020](#). The parking area of which the four percent is calculated from is defined as all of the parking stalls and the drive lane areas created to access the parking stalls.
- C. Minimum Width and Length. Planting areas shall have a minimum average width of 10 feet (measured inside the curb) and shall be the same length as the parking stall or column
- D. Location of Plantings. All planting areas shall be located between parking stalls or the end of parking columns.

- E. Tree Requirements. A minimum of one tree shall be required for each 150 square feet, or fraction thereof, of required landscape areas. Deciduous trees shall have a clear trunk of at least five feet above the ground, and the remaining area shall be landscaped with shrubs and/or ground covers.

PARKING

Parking shall be provided pursuant to the terms of chapter 17.84 MVMC.

General Requirements

- Off-street parking spaces and driveways, when provided in accordance with these regulations, shall be paved with a durable, dust-free surface for vehicle parking. (MVMC 17.84.020.B)
- Property zoned P may have the required off-street parking spaces within 300 feet of a building entrance, measured along a normal pedestrian route. (MVMC 17.84.020.E)
- Lighting of areas provided for off-street parking shall be so arranged that it shall not constitute a nuisance or hazard to passing traffic. (MVMC 17.84.020.F)

Number of Parking Stalls Required

The number of parking spaces required for Educational Facilities / Nursery Schools and Day Care Centers is one parking space per each employee plus loading and unloading areas. (MVMC 17.84.030.G)

Parking Requirements for Mixed Occupancies

Cooperative provision of off-street parking facilities for two or more buildings or uses is allowed. Where adjoining off-street parking facilities of two or more ownerships can be developed and designed as one facility, and where efficiency of off-street parking and circulation and economy of space will result from joint development, and where the total building area involved is 10,000 square feet or greater, a reduction of 10 percent of the total combined required off-street parking spaces may be permitted. (MVMC 17.84.050)

None of the above provisions shall prevent the overlapping cooperative use of off-street parking facilities when the times during which such facilities are used are not conflicting. The development services director shall consider all relevant factors before approving any reduction in the required number of off-street parking spaces and make a written report of findings. (MVMC 17.84.050)

Parking Space Requirements

The first parking space of off-street parking shall meet the van accessible size requirements of MVMC 17.84.066(B). Additional accessible parking shall meet the requirements of Table No. 1 (MVMC 17.84.065) and MVMC 17.84.065 and 17.84.066. All other off-street parking spaces shall meet the requirements shown in the table included in 17.84.060. For 90 degree parking stalls, the minimum stall size is 9' x 19' for full sized vehicles. The aisle width shall be 24 feet for two-way traffic. 25% of the total stall count may be sized for compact cars (8' x 16' stall dimensions).

Accessible Spaces

Accessible parking spaces shall be located on the shortest possible accessible route of travel to an accessible building entrance. 1 of every 6 accessible stalls must meet the requirements for van accessibility (required adjacent aisle width is 96"). For lots of 1-25 vehicles, 1 accessible stall must be provided.

SITE PLAN REVIEW

All developments in this district shall be subject to a site plan review as provided in Chapter 17.90 MVMC.

FIRE CODE

The building must meet the requirements of the International Fire Code (IFC) 2009 edition and will undergo a site planning review by the Mount Vernon Fire Marshall. A fire apparatus access road shall complying with the fire code requirements must extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building. This fire lane access is provided within the staff parking area shown on the test-to-fit site plan. A fire sprinkler room or space is required within the building with exterior access. A fire hydrant must be provided within 450' of the building, and one is included in the project scope.

WAC CHILDCARE REQUIREMENTS

The childcare facility must adhere to WAC guidelines. The following is a summary of the relevant requirements.

WAC 170-295-0080 Licensed Capacity

- (1) Maximum allowable capacity of your center is determined based on useable square footage and available toilets and sinks. The licensed capacity (the number of children you are allowed to have in your center at any one time) may be less than the maximum capacity, but not exceed it. The licensed capacity is based on our evaluation of the program, the ages and characteristics of the children, the experience of the staff, and usable floor space. You must have:
 - (a) Fifty square feet of useable floor space per infant (includes crib, playpen, infant bed and bassinets);
 - (b) Thirty-five square feet of useable floor space for each toddler or older child that is dedicated to the children during child care hours; and
 - (c) Fifteen additional square feet must be provided for each toddler using a crib or playpen when cribs are located in the sleeping and play area.
- (2) The areas included in your square footage must be available at all times for the children. The following areas will not be included in determining the useable square footage for each child:
 - (a) Food preparation areas of the kitchen;
 - (b) Laundry areas;
 - (c) All bath, toilet rooms and hand washing areas;
 - (d) Hallways, diaper changing areas (includes the changing table, sink and twenty-four inches of floor space around the changing table and sink), stairways, closets, offices, staff rooms, lockers and custodial areas;
 - (e) Furnace rooms, hot water heater rooms, storage rooms, or mop sink rooms; and
 - (f) Cabinets, storage, and fixed shelving spaces unless accessible to and used by children (for example, cubbies, shelves for storing toys and puzzles, bookshelves, etc.). If the children do not have access to their cubbies or toy storage areas, it is not included in the square footage.
- (3) You can use a multipurpose room and gymnasium for multiple purposes such as playing, dining, napping, and learning activities, and before and after school programs when the room:
 - (a) Meets the square footage requirements for the purpose and number of children to be served; and
 - (b) Is being used for one purpose and does not interfere with usage of the room for another purpose.
- (4) You may use and consider the napping area as child care space if staff remove mats and cots when they are not in use and the children then have free access to the area.
- (5) We will not issue you a license to care for more children than the rules in this chapter permit.
- (6) We may issue you a license to care for fewer children than the center's maximum capacity.

WAC 170-295-2090 Required Staff to Child Ratios and Maximum Group Sizes

For centers licensed for 12 or more children, the following ratios apply:

- (1) You must ensure the required staff-to-child ratios are met at all times when children are in your care. In centers licensed for thirteen or more children, the licensee must conduct group activities within the group size and staff to child ratio requirements, according to the age of the children:

One month, through 11 months (infant)
Child to staff ratio: 1:4
Maximum group size: 8

Twelve months through 29 months (toddler)
Child to Staff Ratio: 1:7
Maximum Group Size: 14

Thirty months through 5 years (preschooler)

Child to Staff Ratio: 1:10
Maximum Group Size: 20

WAC 170-295-2120

Are there special program requirements for infants and toddlers?

(the following items apply to the quality of the space:)

- (1) When you care for infants and toddlers you must:
 - (a) Encourage them to handle and manipulate a variety of objects;
 - (b) Provide a safe environment for climbing, moving and exploring;
 - (c) Provide materials and opportunities for large and small muscle development;
 - (e) Provide daily indoor opportunities for freedom of movement outside their cribs, in an open, uncluttered space;

WAC 170-295-2130

Outdoor Play Area:

- (1) You must provide an outdoor program that promotes the child's coordination, active play, and physical, mental, emotional, and social development based on their age. The play area must:
 - (a) Adjoin the indoor premises directly or be reachable by a safe route or method;
 - (b) Have adequate drainage and be free from health and safety hazards;
 - (c) Contain a minimum of seventy-five usable square feet per child using the play area at any one time. If the center uses a rotational schedule of outdoor play periods so only a portion of the child population uses the play area at one time, you may reduce correspondingly the child's play area size.
- (2) If you provide full-time care, the activity schedule must provide the child daily morning and afternoon outdoor play;
- (3) If you provide drop-in care only, at our discretion we may approve equivalent, separate, indoor space for the child's large muscle play;
- (4) You must ensure appropriate child grouping by developmental or age levels, staff-to-child ratio adherence, and maintain group size;
- (5) Staff must be outdoors with the children in continuous visual and auditory range;
- (6) You must provide a variety of age-appropriate play equipment for climbing, pulling, pushing, riding and balancing activities; and
- (7) You must arrange, design, construct, and maintain equipment and groundcover to prevent child injury.

WAC 170-295-3040

How often must children wash their hands?

Children must wash their hands with soap and warm water:

- (1) On arrival at the center;
- (2) After using the toilet;
- (3) After the child is diapered;
- (4) After outdoor play;
- (5) After playing with animals;
- (6) After touching body fluids (such as blood or after nose blowing or sneezing); and
- (7) Before and after the child eats or participates in food activities.

WAC 170-295-3220

What type of kitchen material and equipment is required?

You need the following equipment to cook and serve meals without restrictions on the type of menus or foods that you can cook, serve or store:

- (1) Kitchen walls, counter tops, floors, cabinets and shelves that are:
 - (a) Maintained in good repair to include being properly sealed without chips or cracks;
 - (b) Moisture resistant; and
 - (c) Maintained in a clean and sanitary condition.
- (2) A range with a properly vented hood or exhaust fan, except when serving only snacks;

- (3) A refrigerator, freezer or a combination refrigerator with sufficient space for proper storage and cooling of food;
- (4) Handwashing facilities located in or adjacent to the food preparation area with handwashing procedures posted at each sink used for handwashing and followed by all persons who participate in food preparation.
- (5) A method to clean and sanitize equipment using:
 - (a) A two compartment sink and an automatic dishwasher capable of reaching a temperature of 140 degrees Fahrenheit; or
 - (b) The means to appropriately clean and sanitize dishes and utensils through the use of a three compartment sink method where sink one is used to wash, sink two is used to rinse, and sink three contains a sanitizing ingredient;
- (6) You may use a microwave oven to reheat foods if the food is:
 - (a) Rotated or stirred during heating;
 - (b) Covered to retain moisture; and
 - (c) Held for two minutes prior to serving to allow the temperature to spread evenly throughout the food.

WAC 170-295-4120

What must I do to be sure that diaper changing is safe and does not spread infections?

- (1) Your diaper changing table and area must:
 - (a) Have a washable, moisture resistant diaper-changing surface that is cleaned and sanitized between children;
 - (b) Be a table or counter with a protective barrier on all sides that is at least three and one-half inches higher than the surface that the child lays on;
 - (c) Have a garbage can with a lid, plastic liner, and method for disposing of hand drying supplies so that a garbage can lid does not have to be opened with hands;
 - (d) Be on moisture impervious and washable flooring that extends at least two feet surrounding the diaper changing and handwashing area; and
 - (e) Be directly adjacent to a sink used for handwashing supplied with:
 - (i) Warm running water (between 85 degrees Fahrenheit and 120 degrees Fahrenheit);
 - (ii) Soap; and
 - (iii) A sanitary method for drying hands (single-use towels).

WAC 170-295-5020

How do I maintain a safe environment?

- (i) Objects falling on the children (for example: Heavy items on open shelving that could fall in an earthquake or similar emergency);
- (2) To further prevent injuries, you must
 - (a) Provide child height handrails on at least one side of the steps, stairways, and ramps;
 - (b) Provide guardrails for elevated play areas and stairs;
 - (c) Use listed tamper resistant receptacles or use tamper resistant, non-moveable, non-removable cover plates in areas accessible to children preschool age and younger;
 - (d) Shield light bulbs and tubes by using a protective barrier to prevent shattering into child-accessible areas, food, and storage areas;
 - (e) Provide screens for windows or limit the opening capability of any windows within reach of children to less than three and one-half inches. Windows with limited opening capabilities cannot be the designated fire escape window. Windows protected with guards must not block outdoor light or air in areas used by children;
 - (f) Provide a barrier for glass areas such as windows or sliding glass doors that extend down to the child's eye level by placing a barrier between the child and glass or something placed on the glass at the child's eye level such as stickers or art work so that the child does not try to go through the solid glass;
 - (g) Not place cribs, play pens, bassinets, infant beds, indoor climbing structures next to windows unless of safety glass; and
 - (h) When using heaters capable of reaching 110 degrees Fahrenheit on the surface, you must protect children from burn hazards by making them inaccessible to children or locating them where children cannot reach them.
- (4) You must implement a method to monitor entrance and exit doors to prevent children from exiting the buildings unsupervised. You may use:
 - (a) A door alarm;
 - (b) A bell that can be heard throughout the building;
 - (c) Adult supervision at the exits; or

- (d) Other method to alert the staff (you may not lock the door to prevent an exit. It is against the fire code).
- (5) You must maintain one or more telephones on the premises in working order that is accessible to staff at all times.

WAC 170-295-5040

How do I maintain a clean and sanitized environment?

- (1) Surfaces must be easily cleanable. A cleanable surface is one that is:
 - (a) Designed to be cleaned frequently;
 - (b) Moisture-resistant; and
 - (c) Free from cracks, chips or tears.
- (2) Examples of cleanable surfaces include linoleum, tile, sealed wood, and plastic.
- (3) You must maintain the building, equipment and premises in a clean and sanitary manner that protects the children from illness including but not limited to:
 - (a) Ensure that floors around sinks, toilets, diaper change areas and potty chairs are moisture resistant and easily cleanable for at least twenty-four inches surrounding the surfaces;

WAC 170-295-5060

How must I store maintenance and janitorial supplies?

- (1) You must provide safe storage for flammable and combustible liquids and chemicals used for maintenance purposes and operation of equipment. They must be in a location designed to prevent child access at all times. The liquids and chemicals must be:
 - (c) Ventilated either by mechanical ventilation to the outdoors or through a window that opens on the exterior wall.
- (2) Your janitorial or housekeeping storage must have:
 - (a) Floor surfaces that are moisture impervious and easily cleanable;
 - (b) A designated utility or service sink for disposing of wastewater; and
 - (c) A place for mop storage that is ventilated to the outside.

WAC 170-295-5090

What are the fence requirements?

- (1) You must fence the outdoor play area to:
 - (a) Prevent unauthorized people from entering; and
 - (b) Prevent children from escaping and having access to hazardous areas.
- (2) At a minimum fences and gates must:
 - (a) Be safe, and maintained in good repair; and
 - (b) Be designed to discourage climbing and prevent entrapment.

WAC 170-295-5100

What are the requirements for toilets, handwashing sinks and bathing facilities?

- (1) You must provide:
 - (a) A toilet room that is vented to the outdoors;
 - (b) A room with flooring that is moisture resistant and washable;
 - (c) One flush-type toilet and one adjacent sink for handwashing within auditory (hearing) range of the child care classrooms for every fifteen children and staff;
 - (d) Toileting privacy for children of opposite genders who are six years of age and older, or when a younger child demonstrates a need for privacy; and
 - (e) A mounted toilet paper dispenser within arm's reach of the user with a constant supply of toilet paper for each toilet.
- (2) Children eighteen months of age or younger are not included when determining the number of required flush-type toilets.
- (3) If urinals are provided, the number of urinals must not replace more than one-third of the total required toilets.
- (4) Toilet fixture heights must be as follows:
 - (a) Toddler:
Eighteen months through 29 months
The toilet fixture height must be:

- (i) Ten - 12 inches (child size); or
 - (ii) Fourteen - 16 inches (adult size)
- with a safe, easily cleanable platform that is moisture impervious and slip resistant.

(b) Preschool or older:

Thirty months of age through five years of age not enrolled in kindergarten or elementary school

The toilet fixture height must be:

- (i) Ten - 12 inches (child size); or
- (ii) Fourteen - 16 inches (adult size) with a safe, easily cleanable platform that is moisture impervious and slip resistant.

(5) Handwashing sink heights must be as follows:

If the age group is: The sink height must be:

(a) Toddler: Twelve months through 29

- (i) Eighteen - 22 inches; or
- (ii) Provide a moisture and slip resistant platform for children to safely reach and use the sink.

(b) Preschool or older: Thirty months of age through five years of age not enrolled in kindergarten or elementary school

- (i) Twenty-two - 26 inches; or
- (ii) Provide a moisture and slip resistant platform for children to safely reach and use the sink.

(c) School age: Over five years of age or enrolled in kindergarten or elementary school

- (i) Twenty-six - 30 inches; or
- (ii) Provide a moisture and slip resistant platform for children to safely reach and use the sink.

(6) Infants are not included when determining the number of sinks required for handwashing.

(7) The sink for handwashing must:

- (a) Be located in or immediately outside of each toilet room;
- (b) Have water controls that are accessible by the intended user; and
- (c) Not be used for food preparation, as a drinking water source or a storage area.

(8) You must have:

- (a) Single-use paper towels and dispensers; or
- (b) Heated air-drying devices.

WAC 170-295-5110

What are the requirements if I do laundry on the premises or offsite?

(1) If you choose to do laundry on the premises or offsite you must be sure the laundry is:

- (b) Sanitized with hot water that reaches at least 140 degrees Fahrenheit or use an alternative method such as chlorine bleach that has been approved by the department;
- (c) Stored to keep soiled linen and laundry separate from clean linen;
- (d) Separate from kitchen and food preparation areas; and
- (e) Inaccessible to children.

(2) You also must ensure the dryer is ventilated to outside the building.

WAC 170-295-5140

Are there any requirements for storage space provided for children?

You must provide accessible individual storage space for each child's belongings that prevents the spread of diseases or parasites such as scabies and lice.

WAC 170-295-5150

Are there temperature requirements for my facility?

- (1) You must maintain all rooms used by children at temperature of:
 - (a) Sixty-eight degrees Fahrenheit to 75 degrees Fahrenheit during winter months; and
 - (b) Sixty-eight degrees Fahrenheit to 82 degrees Fahrenheit during the summer months.
- (2) In addition, you must:
 - (a) Equip the room or building with a mechanical air cooling system or equivalent when the inside temperature of child-occupied areas exceeds 82 degrees Fahrenheit. This includes but is not limited to, swamp coolers, fans, air conditioners, or drip systems;
 - (b) Not take children outdoors during extremes temperatures that put children at risk for physical harm.

NAEYC Program Standards and Accreditation Criteria

The college has also requested that the physical facility be planned to adhere to the NAEYC accreditation requirements. The following is a summary of the relevant requirements.

Standard 9 – Physical Environment

9.A.01

- A. equipment and furnishings for diaper changing and changing soiled underwear or other clothing that are located away from food preparation areas;
- B. hand-washing sinks within arm's length of diaper changing tables;
- C. a chair with a back and a seating height that allows the child to sit with his or her feet on the floor or ground (for each child over the age of one year);

9.A.02

- A. Individual space is provided for each child's belongings.

9.A.05

- A. The indoor environment is designed so staff can supervise children by sight and sound at all times without relying on artificial monitoring devices.
- B. In semiprivate areas, it is always possible for both children and adults to be observed by an adult from outside the area.

9.A.09

- A. clearly defined places where families can gather information regarding the daily schedule and upcoming events;
- B. clearly defined places where families sign in, sign out, and gather information about their child's day;
- C. places for displaying children's work; and
- D. features that moderate visual and auditory stimulation.

9.A.10

- A. The indoor environment includes washable, soft elements that allow groups of children or adults and children to sit in close proximity for conversations or comforting.

9.A.11

- A. Clear pathways are available for children to move from one area to another without disturbing other children's work and play.

9.A.12

- A. accommodate children individually, in small groups and in a large group.
- B. divide space into areas that are supplied with materials organized in a manner to support children's play and learning.
- C. provide semiprivate areas where children can play or work alone or with a friend.
- D. provide children with disabilities full access (making adaptations as necessary) to the curriculum and activities in the indoor space.

Department of Early Learning Review Local Contact

Mount Vernon DEL Office Mail Stop: N/A	900 E College Way, Suite 100 Mount Vernon, WA 98273 Mailing Address: 4101 Meridian St. Bellingham, WA 98226	360.714.4118 (phone) Toll-free: 1.800.344.8219 360.714.4205 (fax)
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BUILDING CODE

IBC 2012 edition with Washington State Amendments.

CHAPTER 3 – USE AND OCCUPANCY

SECTION 302 OCCUPANCY CLASSIFICATION

302.1 GENERAL

Structures or portions of structures shall be classified based on the occupancies listed in section 302.

SECTION 305 EDUCATIONAL GROUP E

305.2 EDUCATION GROUP E, DAY CARE FACILITIES

This group includes portions of buildings occupied by more than five children older than 2-1/2 years of age who receive educational, supervision or personal care services for fewer than 24 hours per day.

SECTION 308 INSTITUTIONAL GROUP I

308.6 INSTITUTIONAL GROUP I-4, DAY CARE FACILITIES

This group includes portions of buildings occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians. This group shall include child day care.

308.6.1 CLASSIFICATION AS GROUP E

A child day care facility that provides care for more than five children but no more than 100 children 2-1/2 years of age or less, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

SECTION 504 BUILDING HEIGHTS

504.2 AUTOMATIC SPRINKLER SYSTEM INCREASES

Table 503 maximum building height is 40 feet, increased by 20 feet = 60 feet maximum.

Maximum number of stories is (1), increased by 1 story = 2 stories.

These increases are permitted in addition to any increases permitted by building area Section 506.2 & 506.3

SECTION 506 BUILDING AREA MODIFICATIONS

TABLE 503

E Occupancy

At = 9,500 sf, Assuming Type VB Construction

At = Tabular building area per E occupancy = 9,500 sf

If = Area increase due to frontage = not applicable, not directly access by a public way

Is = Area increase due to sprinkler protection = 300% = 3 (one story above grade)

F = Building perimeter than fronts on a public way = 0'

P = Total building perimeter = 306'

W = Width of public way (is 30' when width exceeds 30') = not applicable, not directly access by a public way

506.1 GENERAL: THE ALLOWABLE BUILDING AREA IS CALCULATED USING THE FOLLOWING FORMULA:

$$Aa = \{At + [At \times If] + [At \times Is]\}$$

Aa = Allowable building area per story

If = Area increase due to frontage per 506.2

Is = Area increase due to sprinkler per 506.3

$$Aa = \{At + [At \times If] + [At \times Is]\} = \{9,500 \text{ sf} + [9,500 \text{ sf} \times 0] + [9,500 \text{ sf} \times 3]\}$$

$$Aa = 38,000 \text{ sf}$$

SECTION 508 MIXED USES AND OCCUPANCY

508.3 NONSEPARATED OCCUPANCIES

The entire building is designated as E occupancy so no separation is required.

CHAPTER 6 TYPES OF CONSTRUCTION

TABLE 601 FIRE RESISTANCE RATING

Fire resistance requirements by building elements, per Type VB

Primary Structural Frame Not Rated

Bearing Exterior Walls Not Rated

Bearing Interior Walls Not Rated

Non-bearing Walls and Partitions, Exterior Not Rated

Non-bearing Walls and Partitions, Interior Not Rated

Floor Construction and Secondary Members Not Rated

Roof Construction and Secondary Members Not Rated

TABLE 602 FIRE RESISTANCE RATING REQUIREMENT FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

Where separation distance is greater than 30 ft, there is no fire rating requirement for exterior walls no matter what type of construction.

SECTION 602 CONSTRUCTION CLASSIFICATION

602.5 ALLOWABLE MATERIALS

Type V construction is that type of construction in which the structural elements, exterior walls, and interior walls are of any material permitted by this code.

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES

SECTION 704 FIRE RESISTANCES RATING OF STRUCTURAL MEMBERS

704.1 SCOPE

The provisions of this chapter do not apply because the building is proposal as a Type VB construction, which requires no fire-resistance rated assemblies.

SECTION 711 HORIZONTAL ASSEMBLIES

- 711.3 FIRE RESISTANCE RATING
The fire resistance rating of the floor and roof assemblies shall not be less than required by the building type of construction.
- 711.4 CONTINUITY
Skylights and other penetrations through fire-resistance rated roof decks are permitted to be unprotected.
- 711.4.1 NON FIRE RATED ASSEMBLIES
Joints in or between floor assemblies without a required fire resistance rating shall comply with one of the following:
1. The joint shall be concealed within the cavity of a wall.
 2. The joint shall be located above a ceiling.
 3. The joint shall be sealed, treated, or covered with an approved material or system to resist the free passage of flame and the products of combustion.
- Exception: Joints meeting one of the joint exceptions listed in section 715.1.

SECTION 712 VERTICAL OPENINGS

- 712.1 GENERAL
General: Applicable to Shaft Enclosures, duct penetrations, penetrations, joints, open unenclosed stairs.
- 712.1.1 SHAFT ENCLOSURES
Shaft enclosures must comply with section 713
- 712.1.4 PENETRATIONS
Penetrations shall comply with section 714
- 712.1.5 DUCTS
Ducts shall comply with 717.6

SECTION 714 PENETRATIONS

- 714.1 SCOPE
The provisions in this section protect through penetrations and membrane penetrations of horizontal assemblies and fire resistance rated wall assemblies.
- 714.4.2 NONFIRE-RESISTANCE-RATED ASSEMBLIES
Penetrations shall meet the requirements of section 713 or shall comply with 714.4.2.1 or 714.4.2.2.
- 714.4.2.1 NONCOMBUSTABLE PENETRATING ITEMS
Annular space must be filled to prevent the passage of flame and the products of combustion with an approved noncombustible material or with a fill void or cavity material that is tested and classified in this application.
- 714.4.2.2 PENETRATING ITEMS
Annular space must be filled to prevent the passage of flame and the products of combustion

SECTION 715 FIRE RESISTANT JOINT SYSTEMS

715.1 GENERAL

Joints installed in or between fire resistance rated walls, floors or roofs shall be protected by an approved fire resistant joint system of equal protection time as the fire resistance rating of the wall, floor or roof in which it is installed.

Exceptions:

7. Walls that are permitted to have unprotected openings.

9. Control Joints smaller than .625".

SECTION 717 DUCTS AND AIR TRANSFER OPENINGS

717.6 HORIZONTAL ASSEMBLIES

Penetrations by ducts and air transfer openings of a floor or floor/ceiling assembly shall be protected by a shaft enclosure that complies with 717.6.3.

717.6.3 NON FIRE-RESISTANCE RATED FLOOR ASSEMBLIES

Duct systems constructed of approved materials in accordance with mechanical code that penetrate non-rated assemblies shall be protected through one of the following methods:

1. A shaft enclosure

2. The duct connects 2 stories or less and the annular space around the penetrating duct is protected with an approved noncombustible material that resists the free passage flame and the products of combustion.

SECTION 718 CONCEALED SPACES

718.1 GENERAL

Fireblocking shall be installed per 718.2. Draftstopping shall be installed in floor/ceiling spaces and attic spaces shall comply with 718.3 and 718.4 respectively.

718.2 FIREBLOCKING

Fireblocking shall be installed to cut off concealed draft openings both vertical and horizontal, and shall form an effective barrier between floors, between a top story and a roof or attic space. Fireblocking shall be installed at locations specified in 718.2.2 – 718.2.7.

718.2.6 EXTERIOR WALL COVERINGS

Fireblocking is required within concealed spaces of exterior wall coverings and other architectural elements that are permitted to be constructed of combustible materials or where constructed with combustible frames. Fireblocking shall be installed at maximum intervals of 20 feet and either direction so that there is no concealed space larger than 100 SF.

718.3 DRAFTSTOPPING IN FLOORS

Draftstopping of attics is not required when the building is equipped with an automatic sprinkler system (718.3.3).

718.4 DRAFTSTOPPING IN ATTICS

Draftstopping of attics is not required when the building is equipped with an automatic sprinkler system (718.4.3).

SECTION 720 THERMAL AND SOUND INSULATING MATERIALS

720.1 GENERAL

Insulating materials, facings and membranes shall comply with the requirements of this section for flame spread characteristics.

720.2 INSULATING MATERIALS

Insulating materials where concealed in any construction type shall have a flame spread index of not more than 25 and a smoke developed index of not more than 450.

CHAPTER 8: INTERIOR FINISHES

SECTION 803 WALL AND CEILING FINISHES

803.1.1 INTERIOR WALL AND CEILING FINISH MATERIALS

Class A: Flame spread 0-25; smoke developed 0-450

Class B: Flame spread 26-75; smoke developed 0-450 (Atrium no less than B)

Class C: Flame spread 76-200; smoke developed 0-450

TABLE 803.9 INTERIOR WALL & CEILING FINISH REQUIREMENTS BY OCCUPANCY

Sprinklered

Group	Exit Enclosures	Corridors	Rooms and spaces
E	B	C	C

SECTION 804 INTERIOR FLOOR FINISH

804.4.2 MINIMUM CRITICAL RADIANT FLUX

In a sprinklered building, materials complying with DOC FF-1 "pill test" or ASTM D2859 are permitted.

SECTION 806 DECORATIVE MATERIALS AND TRIM

806.1 GENERAL REQUIREMENTS

1. In Group E occupancies, curtains, draperies, hangings and other decorative materials suspended from walls or ceiling shall meet the flame propagation performance criteria of NFPA 701 or be non-combustible.

Fixed or moveable walls and partitions, paneling, wall pads and crash pads shall be considered interior finish if they cover 10% of more of the wall or ceiling area, and will not be considered decorative materials or furnishings.

806.1.2 COMBUSTIBLE DECORATIVE MATERIALS

The permissible amount of decorative materials meeting the NFPA 701 shall not exceed 10% of the specific wall or ceiling area to which it is attached.

CHAPTER 9 FIRE PROTECTION SYSTEMS

SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

903.2 WHERE REQUIRED

Approved fire sprinkler systems must be provided in the following conditions:

- 903.2.3 GROUP E
An automatic sprinkler system shall be provided for Group E occupancies with an occupant load greater than 50 individuals calculated per Table 1004.1.2.

SECTION 907 FIRE ALARM AND DETECTION SYSTEMS

- 907.2 WHERE REQUIRED
A manual fire alarm system is not required when Group E occupancies equipped with an automatic sprinkler system which is connected to the building fire alarm system (907.2.3). A single fire alarm pull station is required in an approved location despite this exception – per 907.2.

-
- 907.5 OCCUPANT NOTIFICATION SYSTEMS
A fire alarm system shall annunciate at the fire alarm control unit and shall initial occupant notification upon activation in accordance with 907.5.1 through 907.5.2.3.4.

CHAPTER 10 MEANS OF EGRESS

SECTION 1004 OCCUPANT LOAD

- 1004.1.2 AREAS WITHOUT FIXED SEATING
One occupant per unit area per table 1004.1.2

Relevant Exception: Where approved by the building official, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by calculation shall be permitted to be used in the determination of the design occupant load.

TABLE 1004.1.2 MAXIMUM FLOOR AREAS ALLOWANCES PER OCCUPANT

Space Function	Floor Area per Occupant
Accessory Storage Area / Mechanical	300 gross
Business Areas	100 gross
Day Care	35 net

SECTION 1005 MEANS OF EGRESS SIZING

- 1005.3 REQUIRED WIDTH BASED ON OCCUPANT LOAD
The means of egress width shall not be less than the total occupant load served by the means of egress multiplied by 0.3” per occupant for stairways and by 0.2” per occupant for other egress components.

Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50% of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.

SECTION 1007 ACCESSIBLE MEANS OF EGRESS

- 1007.2 CONTINUITY AND COMPONENTS
Required means of egress shall be continuous to a public way.

SECTION 1014 EXIT ACCESS

1014.2 EGRESS THROUGH INTERVENING SPACES

1. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms are accessory to one or the other, and are not a group H occupancy, and provide a discernible path of travel to an exit.
2. A means of egress cannot pass through a room that can be locked to prevent access.
4. Egress shall not pass through kitchens, storage rooms, closets, or spaces used for similar purposes.

1014.3 COMMON PATH OF EGRESS TRAVEL

The common path of egress travel shall not exceed the distances identified in table 1014.3

TABLE 1014.3 COMMON PATH OF EGRESS TRAVEL

Occupancy	Path of Egress Travel (sprinkler)
E	75'

SECTION 1015 EXIT AND EXIT ACCESS DOORWAYS

1015.1 EXITS OF EXIT ACCESS DOORWAYS FROM SPACES

Two exits shall be provided from any space where one of the following conditions exists:

1. The occupant load of an E occupancy is over 49
2. The common path of travel exceeds one of the limitations of Section 1014.3.
3. Where required by Section 1015.3 - 1015.6.1.

1015.2.1 TWO EXITS

Where a building is equipped with an automatic sprinkler system, the separation distance of the exit doors shall not be less than one-third the dimension of the area served.

1015.6 DAYCARE FACILITIES

Day care facilities, rooms or spaces where care is provided for more than 10 children that are 2-1/2 years of age or less shall have access to not less than two exits or exit access doorways.

SECTION 1016 EXIT ACCESS TRAVEL DISTANCE

TABLE 1016.1 EXIT ACCESS TRAVEL DISTANCE IN SPRINKLER BUILDINGS

E Occupancy:	250'
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1016.3 MEASUREMENT

Exit access path of travel shall be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to an exit.

SECTION 1018 CORRIDORS

TABLE 1018.1 CORRIDOR FIRE-RESISTANCE RATING IN SPRINKLER BUILDINGS

E Occupancy:	0
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1018.4 DEAD ENDS

Where more than one exit is required the exit access shall be arranged such that there are no dead ends in corridors more than 20' in length.

Exceptions: In occupancies in Group B and E, where the building is equipped with a sprinkler system, the length of the dead-end corridors shall not exceed 50'.

CHAPTER 29 WAC – MINIMUM PLUMBING FIXTURES AND ASSEMBLIES

TABLE 2902.1 MINIMUM PLUMBING FIXTURES

Classification	Required WC	Required Lavatory	Drinking Fountain	Service Sinks	Showers
E - Educational	1 per 50	1 per 50	1 per 100	1 required	--
I-4 Child Day Care	1 per 15	1 per 15	1 per 100	1 required	1 required



**SKAGIT VALLEY COLLEGE CHILDCARE CENTER
STRUCTURAL BASIS OF DESIGN**

SUMMARY

Structural systems will be provided to meet the criteria outlined in this report and be coordinated with the architecture and other building systems.

BASIC SYSTEM

The primary structure will be conventionally framed wood construction with 14" TJI roof joist and 6" stud walls. Exterior walls and roof shall be sheathed with 5/8" plywood for wind and seismic resistance. On the south wall, headers above the windows will be glulam beams. These members will carry the roof loads and resist wind forces from the windows.

Cold formed steel framing may be considered for the structure in place of wood if it is determined to be less expensive however the detailing of one or the other will be different so the decision needs to be made prior to development of construction drawings.

The floor slab will be 4" reinforced concrete slab on ground and foundations will be spread footings. Other campus buildings have required compacted fill soils below the footings if firm bearing is not achievable at shallow elevations. This will need to be determined by a geotechnical engineering study.

CODES, REGULATIONS AND STANDARDS:

- 2012 International Building Code with Washington State Amendments
- ASCE 7-10 Minimum Design Loads for Buildings and Other Structures
- ACI 318-11 Building Code Requirements for Structural Concrete
- National Design Specifications for Wood Construction 2012

LOADINGS

Structural Occupancy Category II

Live Loads

Live Load	Min per ASCE 7 (psf)	Design for this project (psf)	Concentrated (lbs) ²
Floor - offices and classrooms	50 ¹	80	2000
Roof (snow)	25	25	Fall protection anchors

1. Partition live load of 15 psf for all offices or other buildings where partition locations may be subject to change unless live load exceeds 80 psf.
2. Concentrated loads are distributed over an area of 2.5 ft x 2.5ft.

Wind Design Criteria

All components on the exterior of the building must resist wind forces. These forces often control the design of window glass, enclosure systems, canopies, sunshades, and roofing. The main structural system will be checked for wind force resistance.

Basic wind speed: 110 mph (Category II)
Exposure B

Seismic Design Criteria

Structure designed for a Seismic Importance Factor of 1.0
Seismic Design Criteria: Site Class D; Seismic Design Category D

**SKAGIT VALLEY COLLEGE
CHILD CARE CENTER
CIVIL NARRATIVE**
Schacht Aslani Architects

General Description

The location currently considered for the Child Care Center is located in the south east corner of the Skagit Valley College Campus in Mt. Vernon, Washington. The site is just north of the existing East Campus Building, off East College Way and is approximately 0.5 acres in area. This project will consist of the construction of a new child care center, associated parking, and other site improvements. The site currently consists of a partially maintained open space area and a portion of a gravel surface parking lot.

Conceptual plans indicate the construction will likely occur on the majority of the site, with the building in the center, detention pond to the south, a child drop off parking area to the west and staff parking to the north.

Excavation

Earthwork for the project will include stripping away the top layer of organics and topsoil, as well as excavation for the building foundation.

The site mildly slopes from the northwest to the southeast. With the building located in the middle of the site, there is an anticipated amount of cut on the north side of the building and fill to the south. A proposed detention pond for stormwater flow control will need to be excavated to a depth of 2.5 feet. All usable cut material will be utilized, if conditions allow, for fill material on site. The excavated material will be removed from the site and disposed of at an approved location in conformance with local and state regulations. The site should be designed to minimize export of on-site soils or import of structural fill.

Stormwater Flow Control

The City of Mt. Vernon follows the Washington State Department of Ecology Manual 2005 for its stormwater regulations. Due to topographic constraints, the site is divided into two drainage basins: the north and south.

North

The north portion of the site is comprised completely of proposed parking areas for the new child care center. Parking lots are classified as impervious, pollution-generating surfaces in which the stormwater from parking lots require stormwater treatment and

flow control. Acceptable means of treatment include biofiltration-swales, coalescing plate oil/water separator, and other methods described in the Department of Ecology, Stormwater Management Manual for Eastern Washington. This design proposes a biofiltration swale in the southeast corner of the parking lot to treat this pollution generating surface before discharging from the site. After routing through the bio swale, the water is then sheet flow dispersed in its natural drainage pattern to the existing wetland area to the east of the site.

South

Preliminary review of the site and the proposed development indicates a detention system will need to be implemented. It was found that the most economical stormwater detention system would be a surface detention pond to the south of the proposed building. The detention pond will have a volume based on 50% of the 2-year up to the 50-year storm event in the region. Stormwater runoff from the development will be collected and conveyed to the detention pond via typical 6-inch storm drainage pipes. A control structure will release the runoff from the detention pond at acceptable release rates prior to discharging into the existing conveyance system to the west of the site. This existing storm system runs south and combines to the storm main in East College Way. All areas collected and routed to the detention pond are considered “clean discharge” and therefore are not required for water quality treatment.

Footing drains will be provided around the perimeter structural footing system. Perforated plastic pipes will be placed such that the highest invert is below the bottom of footing. The pipes will be installed with a minimum of six inches of free draining material and wrapped in filter fabric.

There is an existing open ditch conveyance system that runs through the proposed development. As part of this project, a 12” culvert system will be implemented to reroute the storm system around the site.

Sanitary Sewer Service

Sanitary sewer service will be required for the new building. There are existing sewer lines that run in East College Way and in the previously developed east campus building, located directly south of the proposed child care center. Due to the east campus building located much closer than East College Way, it is anticipated the most economical design would be to tie into this existing sewer pipe that later ties into the sewer main in East College Way. There would be some anticipated asphalt pavement restoration as part of this connection through the existing parking lot.

A project alternate has also been considered to route a new sewer main from the child care center all the way to East College Way. This would be done in anticipation of a future project which would likely be constructed over the existing east campus building

sewer to the immediate south of the child care center. This alternate would require a significant amount more of sewer pipe, and asphalt restoration.

Fire and Domestic Water Service

Similar to the sewer for the project, there are existing water mains in East College Way and in the east campus building site located just south of the proposed project. It has been determined it is most economical to tie into the existing 8" water line in the east campus building parking lot. This water main will be routed north allowing a domestic water line, fire service and a fire hydrant.

The domestic water service will be provided to the new building and a water meter will be required per current City of Mt. Vernon standards. Fire sprinkler service is assumed to be required for the new building with a new Double Detector Check Valve Assembly (DDCVA) fire service inside the building and a Fire Department Connection (FDC) strategically located on site.

Gas Service

Gas Service will be provided to the childcare center and will be connected to the existing gas line at the east campus building. A gas meter will be mounted on the southwest side of the building.

Best Management Practice's (BMP's)

Best Management Practice's (BMP's) are defined as physical, structural, and/or managerial practices that, when used singularly or in combination, prevent or reduce pollution of water caused by construction activities. The proposed project will expand the existing parking lot area for the college and allow for the expansion of a new building. An existing wetland is located 50 feet to the east and BMP's are critical to contain site pollution during construction. Construction access will need to be closely monitored into and out of the project area. A truck washing station will need to be constructed as needed during earthwork activities to prevent sediment to be transferred offsite. Entrance and egress of the construction area for equipment will be via rock construction exits or ATB working surfaces. Catch basin protection will need to be used on existing and new catch basins. Site runoff will be conveyed through interceptor swales located near the toe of excavations to convey runoff to the proposed detention pond with a moveable 55-gallon drum. The movable 55 gallon drum can be placed anywhere along the bottom of this excavation in position to collect silt laden runoff. Clean water can then be pumped from the drum and/or sediment ponds into the existing storm drainage system. The proposed sediment pond will then need to be cleaned and prepared per design following all construction activities.

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
MECHANICAL PRE-DESIGN NARRATIVE

General

The Mechanical design will incorporate systems which will be low-maintenance, high efficiency and durable.

Zoning options to provide a high level of comfort within each space needs to be reviewed in detail to ensure the expectations of temperature control on a space by space basis. Varying system types allow for advantages and disadvantages related to zoning. Other considerations when selecting a mechanical system include thermal comfort, indoor air quality, maintenance impacts, energy use, carbon footprint, first cost, etc. All of these items need to be considered.

Design References

The following references shall be used for the design of the Mechanical systems:

1. Authority Having Jurisdiction: Local Building Department
2. National Codes:
 - a. International Building Code, 2012 Edition.
 - b. International Mechanical Code, 2012 Edition.
 - c. Uniform Plumbing Code, 2012 Edition.
 - d. International Fuel Gas Code, 2012 Edition.
3. Washington State Amendments:
 - a. WAC 51-50 International Building Code, 2012 Edition.
 - b. WAC 51-52 International Mechanical Code, 2012 Edition.
 - c. WAC 51-11 Washington State Energy Code, 2012 Edition.
 - d. WAC 51-56, WAC 51-57 Uniform Plumbing Code, 2012 Edition.
 - e. WAC 51-52 International Fuel Gas Code, 2009 Edition.
4. Standards:
 - a. NFPA-54, National Fuel Gas Code, 2012 Edition.
 - b. NFPA 90A: Installation of Air Conditioning and Ventilating Systems, 2012 edition.
 - c. ASHRAE Standard 62.1-2013.
 - d. ASHRAE Standard 55-2013.
5. Outdoor Design Conditions:
 - a. Summer Design Condition: 83F/66F dB/wB
 - b. Winter Design Condition: 20F
6. Indoor Design Conditions:
 - a. Summer Design Temperature: 75 F
 - b. Ventilation: Meet state requirements and ASHRAE requirements.
 - c. Relative Humidity: ASHRAE Standard comfort envelope
 - d. Indoor Operating Temperatures: 70 F, 3 ft above floor heating and 74 F cooling

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
MECHANICAL PRE-DESIGN NARRATIVE

Energy Code Requirements

The 2012 Washington State Nonresidential Energy Code, requires the following measures be achieved for this project:

- Mechanical ventilation provided throughout the building.
 - Simultaneous heating and cooling is not permitted.
- Mechanical system efficiencies meet the minimum requirements within the code.
- Mechanical systems provide economizer feature. (VRF systems are allowed some exceptions)
- Motors shall meet the minimum efficiency requirements and shall be ECM where required.
- Each mechanical system shall be provided with thermostat control.
- HVAC and plumbing systems shall be provided with insulation per the minimum requirements of the code.
- Motorized dampers shall be provided at all exterior openings.
- Water heaters shall be insulated per the minimum requirements based on capacity.
- Water heaters shall meet minimum efficiencies based on heating capacity and size of storage.
- All showers and lavatory faucets shall be equipped with flow control devices.
- Building envelope requirements shall meet minimum performance requirements.

Site Utilities

Utilities: The mechanical systems will be connected to water and sewer services designed by the civil engineer. Connection will be at 5'-0" outside of the building. The domestic water backflow device shall be located in the building within the mechanical room. The roof drainage system is currently being anticipated to be located at the exterior to the building.

Water Service: The entering water size for the facility is estimated at 2-1/2" inches. Coordination with the local water utility will need to be completed at the design document phase to determine water backflow requirements for domestic services. Fire Protection will be provided for this building. The double detector backflow device is anticipated to be located inside the building with the fire department connection. Both the water and fire riser will be located within a mechanical room on the ground floor.

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
MECHANICAL PRE-DESIGN NARRATIVE

Plumbing System and Plumbing Specialties

Domestic Hot Water System: One electric water heater will be sized to handle the domestic water heating load.

Plumbing Fixtures: Plumbing fixtures will utilize low consumption components to minimize water usage. Water closets will use "dual flush" flush valves. Sinks and lavatories will use low flow aerators. Floor drains will be provided in all restrooms. Thermostatic mixing valves will be provided for lavatories/sinks.

Sanitary Waste and Vent System: A sanitary waste and vent system will be installed to serve all fixtures within the building. Piping for the domestic hot and cold water lines will be Type L copper with lead free soldered or brazed joints for above grade piping. Hot water systems will be fully insulated to meet Washington state energy code requirements and cold water piping will be fully insulated for condensation control. It is the intent of the design not to have any below grade or foundation installed domestic piping other than trap primer piping. Floor drains will be served by copper trap primer lines served from one or more electronic trap primers. All waste systems and soil piping will be routed with 2% slope and be cast iron joined with heavy duty stainless steel band couplers. Vent piping systems shall be cast iron as well. All plumbing systems will be per plumbing code requirements. Valving will be provided throughout the facility for proper maintenance and servicing of equipment.

Fire Protection

Fire Sprinkler System: The building will be fully sprinkled for fire protection. The design will be a wet pipe system in all interior areas with dry-type sidewall and/or pendant heads providing protection of the porch and the south roof overhang. Interior sprinkler heads will be quick response type with finish and style (recessed, concealed, etc.) to be coordinate with the owner and architect during design phase. The building will have one fire service entrance at the mechanical room. Fire system backflow protection will consist of a double detector check valve assembly. A post indicator valve may be required. The fire department connection will be located per the Fire Marshal's requirements.

HVAC Systems

Three split system heat pumps will be provided. They will provide independent heating and cooling for each of the three primary daycare spaces. Each system will consist of an outdoor unit located on a pad on the north side of the building. A pair of refrigerant pipes will connect each outdoor unit to an indoor air handling unit which would be located in the attic space above either the main corridor or the respective storage/laundry room. Air would be ducted to ceiling diffusers in each space as well as adjacent ancillary spaces and the office. Air would be returned

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
MECHANICAL PRE-DESIGN NARRATIVE

from the daycare rooms and the office via ductwork. Bathrooms, the diapering room, laundry/storage rooms, and kitchens would be exhausted without recirculation. Outside air would be ducted to each unit independently from louvers on nearby exterior walls.

Exhaust Systems: Dedicated fans handle the exhaust air for toilet rooms, diaper rooms, custodial rooms and any other spaces where excessive heat and/or odors are present. The exhaust fans can be located on the roof or above ceilings near the area being area served such that exhaust air is expelled from the building through louvers located on building exterior walls.

Energy Management and Control System (EMCS): The mechanical systems in the building will be controlled and monitored by an energy management and control system (EMCS). In addition to controlling the mechanical equipment the EMCS will monitor and control other systems in the building. The EMCS can be connected to Skagit Valley College's central EMCS system for remote monitoring and control by maintenance personnel. The primary features included in the EMCS and systems that can be monitored or controlled are identified in the following lists.

System Features

- Building Temperature Control
- Building Ventilation Control
- On-Site Computer for Local Operator Interface
- Graphic System Interface for Intuitive Operator Control
- Centralized Scheduling of Equipment Operation
- Optimum Equipment Start Control for Occupied Periods
- Trend Logging of Controlled and Monitored Points
- Low Voltage System Wiring Routed in Metal Raceway
- Operator Interface to Allow for Global Freeze Protection Override
- Operator Interface to Allow for Global Air Handling System Emergency Shutdown

Systems Monitored and/or Controlled

- Control and Monitor all HVAC Units and Pumps
- Control and Monitor all Exhaust Fans
- Control and Monitor all Domestic Water Heating Equipment
- Control and Monitor all Motorized Dampers
- Monitor Outside Air Temperature and CO2 Levels
- Monitor Electrical Service Phase Failure
- Control Exterior Lighting
- Monitor Power and Water Consumption
- Monitor Building Intrusion Alarm System (General Alarm)
- Monitor Building Fire Alarm System (General Alarm)
- Control Fire Alarm Shutdown of Heating and Ventilating Equipment

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SKAGIT VALLEY COLLEGE CHILDCARE CENTER
ELECTRICAL PRE-DESIGN NARRATIVE

General

Electrical systems will be provided as described below in accordance with the design criteria, drawings local codes and standards.

Design References

The following references shall be used for the design of the Electrical systems:

- WAC 296-46B: Electrical Safety Standards, Administration and Installation
- 2012 Washington State Nonresidential Energy Code
- 2012 National Electrical Code
- 2012 International Building Code with Washington State Amendments
- 2012 International Fire Code with Washington State Amendments
- 2012 International Mechanical Code with Washington State Amendments
- Illuminating Engineering Society of North America (IESNA), Lighting Handbook
- NFPA 72; National Fire Alarm Code
- EIA/TIA 568A Commercial Building Telecommunications Cabling Standard
- EIA/TIA 569 Commercial Building Standard for Telecommunications Pathways and Spaces.
- PSE Power Service Standards

Energy Code Requirements

The 2012 Washington State Nonresidential Energy Code edition requires the following measures.

- Local lighting controls shall be installed within each space.
- Lights located within daylight zones require automatic dimming control within classrooms, corridors, offices, etc.
- Automatic lighting controls are required to shut off exterior lighting via a timeclock or photocell.
- Automatic lighting controls are required to shut off interior building lighting.
- Occupancy sensors are required in classrooms and meeting/conference rooms and in offices smaller than 300 sf.
- Spaces with occupancy sensors shall have a manual switch for shutting lights off.
- Lighting controls shall be commissioned.
- Lighting power allowances shall not exceed the following:
 - o Exterior:
 - Parking / outdoor areas: 0.10 Watt/square foot
 - Building exterior: 0.16 Watts/square foot
 - o Interior: 0.99 Watts/square foot

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
ELECTRICAL PRE-DESIGN NARRATIVE

Power – Utility Service:

The building will be connected from the existing Puget Sound Energy underground distribution that currently serves the East Campus Building and adjacent east parking lot. The approach is to arrange with PSE for a new utility pad mount transformer adjacent to the building connected from the existing East Campus Building transformer. This approach is subject to PSE approval of an additional pad mount transformer. If PSE does not approve an additional transformer, secondary service could be connected from the existing pad mount transformer. In this case the transformer may need to be replaced by PSE depending on capacity.

The nearest campus owned power distribution service panel is adjacent to the baseball field. Power could potentially be connected from this location, however, due to feeder length this is a higher cost option than connecting to the adjacent PSE power source.

Telecommunications Service:

A campus owned telecommunications vault is currently located north of the site which can be utilized for telecommunications connection to the Childcare building. Existing 4" underground conduit infrastructure interconnects this vault with Roberts Hall. Single mode fiber optic cabling and multi-pair copper cabling will be extended in existing conduit from Roberts Hall to the existing vault, and in a new 3" conduit from the vault to the Childcare building.

Power Distribution:

The service voltage will be 208/120 Volts wye, 3 phase, 4 wire. The preliminary service size for the project is 225 Amps, and includes provisions for building lighting, mechanical and miscellaneous power loads.

A service entrance panel and utility metering enclosure will be provided in the electrical room. The utility power meter will be mounted at building exterior outside of the electrical room.

The electrical panel will have bolt-on circuit breakers and copper bus. Panel will be fully rated for the available fault current.

Wiring Methods:

Feeders and branch circuits will utilize copper conductors with 600 Volt THWN/THHN insulation. Conductor size shall be #12 AWG minimum. Aluminum conductors will not be permitted. The use of metal clad (MC) cable will not be permitted. Interior raceways shall utilize electrical metallic tubing. Below grade conduit will be PVC schedule 40.

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
ELECTRICAL PRE-DESIGN NARRATIVE

Wiring Devices:

Wiring devices in general areas shall be specification grade with plastic coverplates. Kitchen area devices shall utilize stainless steel coverplates. Receptacles shall be tamperproof throughout, GFCI outlets will be used within 6' of all lavatories. Standard mounting height shall be +18" for receptacles and +44" for switches.

Transient Voltage Surge Suppression:

Transient Voltage Surge Suppression (TVSS) will be provided at the service entrance panel to protect from utility switching transients and other outside disturbances.

Grounding System:

The electrical system will be grounded in accordance with the NEC. The grounding electrode system will consist of ground rods, a concrete-encased electrode, structural steel and underground metallic water piping.

Equipment grounding conductors will be provided for all feeders and branch circuits.

Lighting System:

Lighting will be designed to meet codes and building functions and will also consider energy efficiency, controllability and daylighting. Specific fixture types will be reviewed in subsequent design phases. Fixtures will utilize fluorescent or LED lamps. All ballasts shall be electronic, energy saving low harmonic. Dimmable fixtures will be used in automatic daylighting zones.

Emergency lighting shall consist of selected fluorescent fixtures equipped with integral emergency ballasts. Fixtures with emergency ballasts shall include integral emergency battery operation test switch. If integral test switch is not possible, the test switch shall be installed immediately adjacent to the fixture. All exit signs shall be equipped with battery unit and test switch.

Site lighting will include metal halide or LED pole mounted fixtures at parking area, and compact fluorescent or metal halide area fixtures at pedestrian circulation areas.

Site lighting fixtures will be controlled through a photocell and contactor. Automatic controls of interior fixtures will be through occupancy sensors. Fixtures within daylighting zones will be connected to daylight controllers and configured for automatic dimming control.

Telecommunications:

A telecommunications fire treated backboard in the electrical room will serve as the demarcation point and as main cross-connect(MC) location for horizontal cabling infrastructure. A wall mount telecommunications enclosure will be provided. Access control, perimeter detection and CCTV security panels will also be located within this room.

3

Hargis Engineers, Inc.
March 19th, 2014

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MECHANICAL • ELECTRICAL • TELECOMMUNICATIONS

ENGINEERS

SKAGIT VALLEY COLLEGE CHILDCARE CENTER
ELECTRICAL PRE-DESIGN NARRATIVE

Horizontal cabling will be category 6 minimum, four pair, plenum, 24 awg solid copper conductors. Outlets will be Category 6, 8 position, 8 conductor modules.

Conduit will be used for all concealed horizontal cable runs. J-hook open support system will be used above accessible ceilings.

Specific data/voice outlet quantities will be coordinated with the Owner in subsequent design phases.

Fire Alarm System:

A fire alarm system will be provided to monitor the sprinkler system, mechanical smoke duct detectors and pull stations required by codes. Horn/strobe audible devices will be located throughout the building to provide alarm notification. The panel will be connected to the campus networked fire alarm system. The fire alarm panel will be located in the electrical room.

Security Card Access System:

The security systems will include door access card readers and exterior door contacts. Specific security device locations will be coordinated with the Owner in subsequent design phases. Security panel will be located in the electrical room.

END OF DOCUMENT

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Landscape/Site Overview –Narrative

The landscape site design includes

- Entry plazas for the Early Education Center
- outdoor play and learning areas
- Re-pair and renovation of site areas impacted by construction
- Adjacent Parking lot and bioretention and swales for stormwater treatment

The site design will meet the following goals:

- Create a welcoming and secure environment.
- Provide an inviting entrance
- Provide natural, interactive play opportunities for multiple modes of play and learning for the childcare
- Design for ease of maintenance and cost efficiency
- Utilize sustainable materials and practices

Create a welcoming and secure environment

The entry will be attractive and welcoming for the children and their families as well as the adult students and staff who use the building. Many of the children will be dropped off by parents who will walk them to the center; some will use short term parking adjacent to the new building.

The play courtyard will be secured by a six foot tall fence around the perimeter of the yard. The landscaping will allow for supervision of children inside the play area and for security around the perimeter, avoiding areas that would allow hiding spaces that adults cannot supervise.

Provide an inviting entrance

the entry will provide space for informal parent and staff interactions through the use of benches and plantings that create pleasant outdoor space – these informal transitional spaces play an important role in encouraging informal social interaction spaces: they are place to chat with other parents or staff. Planting will be located to soften the building at the parking lot edge

Provide natural, interactive play opportunities for multiple modes of play and learning

Early Learning environments for children have always placed high value on access to natural areas and in the last 10 years the role of nature has been shown to have a significant impact on learning. Instead of sole dependence on play equipment the playground will include plantings and well defined lawn areas –Woven into the fabric of the more ‘naturalized’ play area is a spectrum of functional areas that will provide multiple means of physical and social learning for the three age groups. The types of spaces include transitional spaces between indoor and outdoors, imaginative/ dramatic play areas, sensory learning areas, and big muscle play areas.

Transitional spaces act as porches for cleaning off prior to entering the building, provide covered spaces for small art projects or rainy day activities, and serve as a space to take a child that needs a moment away from the group. These spaces will be located outside of each door from the courtyard and include a bench or storage area. While the spaces are defined as “owned” space outside each door the edges will be defined with moveable planters or benches but not fencing in order to provide staff with flexibility in programming their spaces.

Imaginative play spaces are smaller spaces that allow for social interaction and emotional and intellectual development. Features include: small paved area for the infants, play houses, fences, and, raised planters – (galvanized metal troughs), sand boxes and small climber.

Sensory learning includes the water feature, smells of herbs and aromatic plants, the sound of wind blowing through tall grasses, the feel of sand and dirt in the fingers.

Big muscle play areas - opportunities for climbing, trike-riding and ball play spaces for both the toddlers and pre-k children, including a crawling lawn for the infants and “pre-walking” rail for young toddlers. New pathways, ramps and hill slide (less than 30” ht) will provide physical challenges for the pre-k children.

These typologies will be organized around the functional spaces that the ECDC staff has requested:

Gathering spaces
Music making
Climbing/crawling
Hill slide
Wheel toys area and trike track (separated and not encircling sand box areas or other play spaces)
Sand and water play
Gardening in raised beds.

In addition outdoor storage areas for the wheel toys, trikes and toys, balls and sandbox toys will be included. The storage areas will be located adjacent to the areas they serve – i.e. trike and wheel toys adjacent to the trike track or wheel toy areas and ball storage near ball play areas, etc.

Design for ease of maintenance and cost efficiency

Plantings and site features are designed for durability and easy maintenance over the long term.

The plant material will include hardy native and ornamental plants that are known for their ability to survive our dry summers and wet winters. Plants will include both native species and vegetation that adds seasonal, fragrant, and textural interest to the site. Plant materials will be chosen with young children in mind. Plants with thorns, poisonous leaves or berries, or that attract bees or wasps will not be used. Plants that have interesting smells, colors and adversity in scale and texture will be included to demonstrate the variety of plants found in the natural world.

Irrigation will be provided for establishment of the plant materials and can be abandoned after two or three years if desired (except for the lawn zones). The system will be designed to be efficient by combining plants of similar watering requirements – most of which will be drought tolerant into appropriate zones, and scheduling the irrigation controller to deliver rates of watering appropriate to the needs of the plants.

Maintenance access –

Areas that need regular access by large vehicles will be located closest to the vehicular gate or the road – for example since the sand boxes need to be regularly replenished with fresh sand.

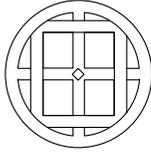
Utilize sustainable materials and practices

The site design can educate the children and college students and set an example for the community by recycling waste materials, capturing runoff, planting drought tolerant native plants, using local materials etc. Trees will provide shade especially in areas of southerly exposure, reducing the need for cooling the building wherever possible.

Installation quality

- 6” of soil for all turf areas – i.e. for the play yard and front entry

- Compost amended soil for erosion control/restoration areas. – on the east side of the building and at the north and south perimeters for construction repair areas
- 12” soil for all planting beds
- Irrigation for all planting beds.
- One year maintenance.
- All plants to be 5 gal and 10 gal.
- If planting in the raingardens can be done in the fall plugs can be used for some plants.



TALASAEA
CONSULTANTS, INC.

MEMO

TO: Evan Bourquard
Schacht|Aslani Architects
901 Fifth Avenue
Seattle, Washington 9816

FROM: David R. Teesdale
PROJECT: TAL-1484
SUBJECT: Skagit Valley College
Reconnaissance

DATE: 26 November 2013
PAGES: 3

Evan:

I completed my reconnaissance of the Church Property (Subject Property) and the adjacent County Property for the Skagit Valley College project. The purpose of my work was to evaluate existing environmental conditions on the properties, determine the location and boundaries of the of critical areas (wetlands and streams), and prepare a preliminary sketch map of the extents of critical areas identified. The following is a summary of my findings.

The Subject Property is a roughly rectangular assemblage of two parcels (P25052 and P25055) that is approximately 9.7 acres in size. Parcel P25055 is the larger of the two and irregularly shaped. The adjacent County Parcel (P25048) is approximately 9.7 acres in size as well. The Subject Property and the County Parcel are bordered on the south by College Way. The smaller of the two Subject Property Parcels (P25052) is currently developed as a church. The Subject Property Parcel is developed in the western ½ as parking and ball field. The northeastern portion is undeveloped and mowed.

I identified two ditches during my site investigation. One ditch extends north-south through the middle of Parcel P25055 and through a pipe approximately ½ the way along the western edge of the Church Parcel. A stormwater detention pond is adjacent to the northwest corner of the Church Parcel. The western ditch daylight at the north end of a swale that extends most of the rest of the length of the Church Parcel western border. It then enters another pipe approximately 176 feet north of College Way. It appears that this pipe connects to the stormwater system associated with College Way.

The eastern ditch begins along the east side of Parcel P25055, approximately 390 feet north of the northeast corner of the Church Parcel. It extends southward along the western border of the Church Parcel to a pipe approximately 28 feet north of College Way. It appears that this ditch also drains to the stormwater system under College Way.

The southern approximately 1/8th of the Church Parcel is maintained as a dry cell detention pond that drains to the College Way stormwater system. The detention pond drains out through a pipe located in the southeast corner of the detention pond and appears to flow towards a catch basin located near the southeast corner of the Church Parcel.

An area of extensive fill exists on Parcel P25055 from the northern edge of the Church Parcel northward for approximately 255 feet. A previous consultant identified an area of

Evan Bourquard
26 November 2013
Page 2 of 2

wetland on this fill adjacent to the northern border of the Church Parcel. This area was ponded at the time of our site visit. However, we determined that there was no saturation of the soil below the surface, despite obvious signs of ponding. It is our opinion that this ponded area is the result of compacted fill material and not a wetland.

We did identify and approximate the boundary of a wetland area on Parcel P25055 north of and abutting the fill area. Hydrology for this wetland may be supported, in part, from water within the western ditch. This ditch appears to have filled in with sediment and allows surface water to flow onto the wetland area.

The wetland extends offsite onto the County Parcel. We noted that a previous consultant had identified approximately 28 wetlands on the County Parcel. We believe that these wetlands are actually connected into one wetland and is contiguous with the wetland on Parcel P25055. We did not determine the extent of wetland conditions on the County Parcel at this time.

The wetland is a Category IV wetland, based on the *Washington State Wetland Rating System for Western Washington* (Hruby 2006). Based on City of Mount Vernon Code, the wetland has a 50-foot buffer measured from the delineated wetland edge. The attached figure illustrates the approximate extent of wetland conditions and the approximate buffer impact on the Subject Property.

We trust that this information is sufficient for your current needs. If you have any questions or require additional information, please call Ann Olsen or me at (425) 861-7550.

Sincerely,
TALASAEA CONSULTANTS, INC.

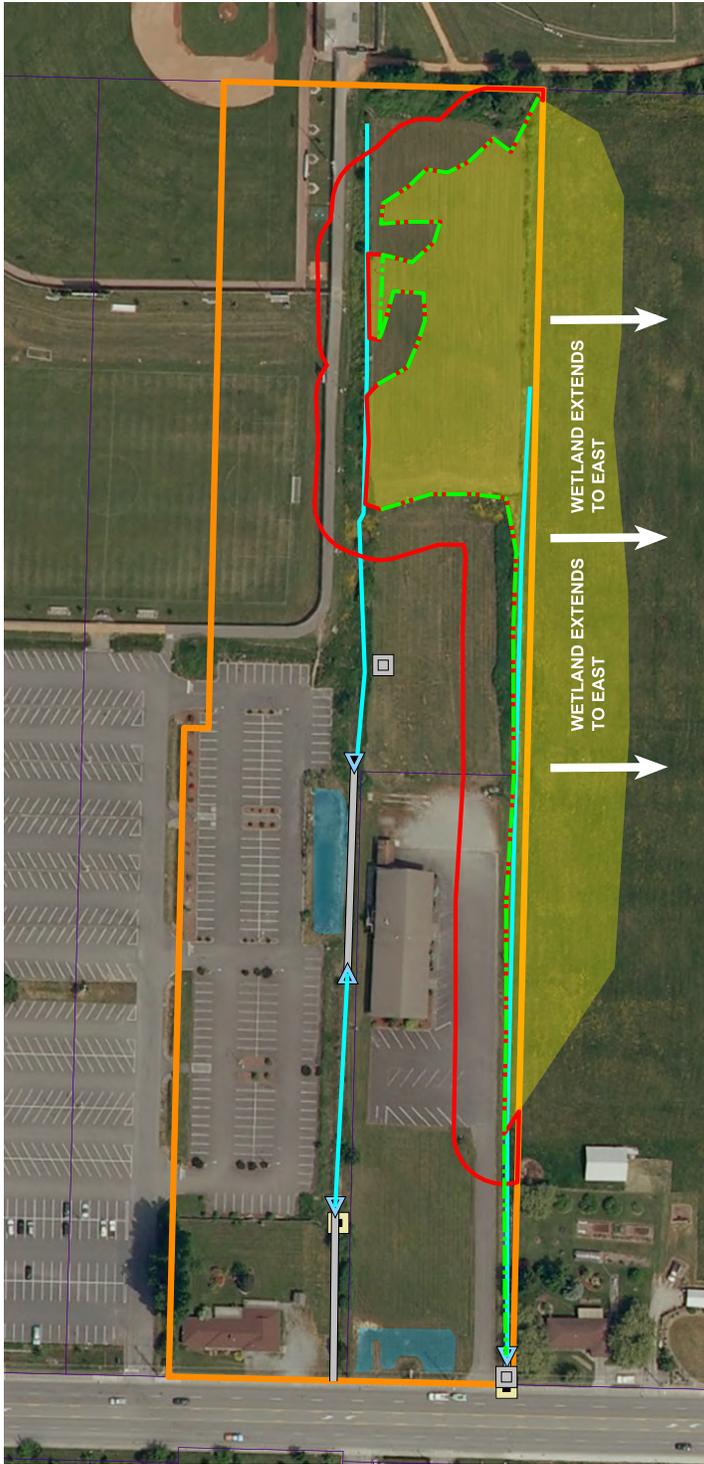
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Digital Signature. Not for use on financial or legal documents.

David R. Teesdale
Senior Wetland Ecologist

Attachment.

Resource & Environmental Planning
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LEGEND	
	Subject Property
	Wetland
	50-ft Buffer
	Detention Pond
	Utility Vault
	Ditch
	Culvert Inflow
	Culvert Outflow
	Piped Conveyance
	Catch Basin



Approximate Scale: 1 in : 150 ft

TAL-1484

Approximate Wetland Location
 Skagit Valley College Church Property
 Mount Vernon, Washington

NOTE: This image is a sketch map and not an actual surveyed wetland delineation. This image should be used for conceptual planning purposes only.